

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions
reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☒

OTHER

SINGLE
ZONE ☐

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Celsius Energy Company

3. ADDRESS OF OPERATOR

P. O. Box 458, Rock Springs, Wyoming 82902

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

SW SW, 540' FSL, 510' FWL

At proposed prod. zone

DEC 12 1985

DIVISION OF OIL
GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.

U-7496

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

--

7. UNIT AGREEMENT NAME

Sky

8. FARM OR LEASE NAME

Unit Federal

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC. T. R. M. OR BLK.
AND SURVEY OR AREA

12-38S-25E

12. COUNTY OR PARISH

San Juan

13. STATE

Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximately 7 miles northeast of Hatch Trading Post.

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any)

510'

16. NO. OF ACRES IN LEASE

679.81

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

None

19. PROPOSED DEPTH

6,255'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

GG 5705'

22. APPROX. DATE WORK WILL START*

December 25, 1985

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4	9-5/8	36	2015'	2015' Regular Type G w/2% CaCl
8-3/4	7	26	6255'	1000' above uppermost producing zone with 50-50 Pozmix A

See attached drilling plan.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL GAS AND MINING

DATE 12/17/85
BY John R. Bays
WELL SPACING: 302

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

A. J. Maser

TITLE Drilling Superintendent

DATE December 10, 1985

(This space for Federal or State office use)

PERMIT NO.

43-037-31235

APPROVAL DATE

APPROVED BY

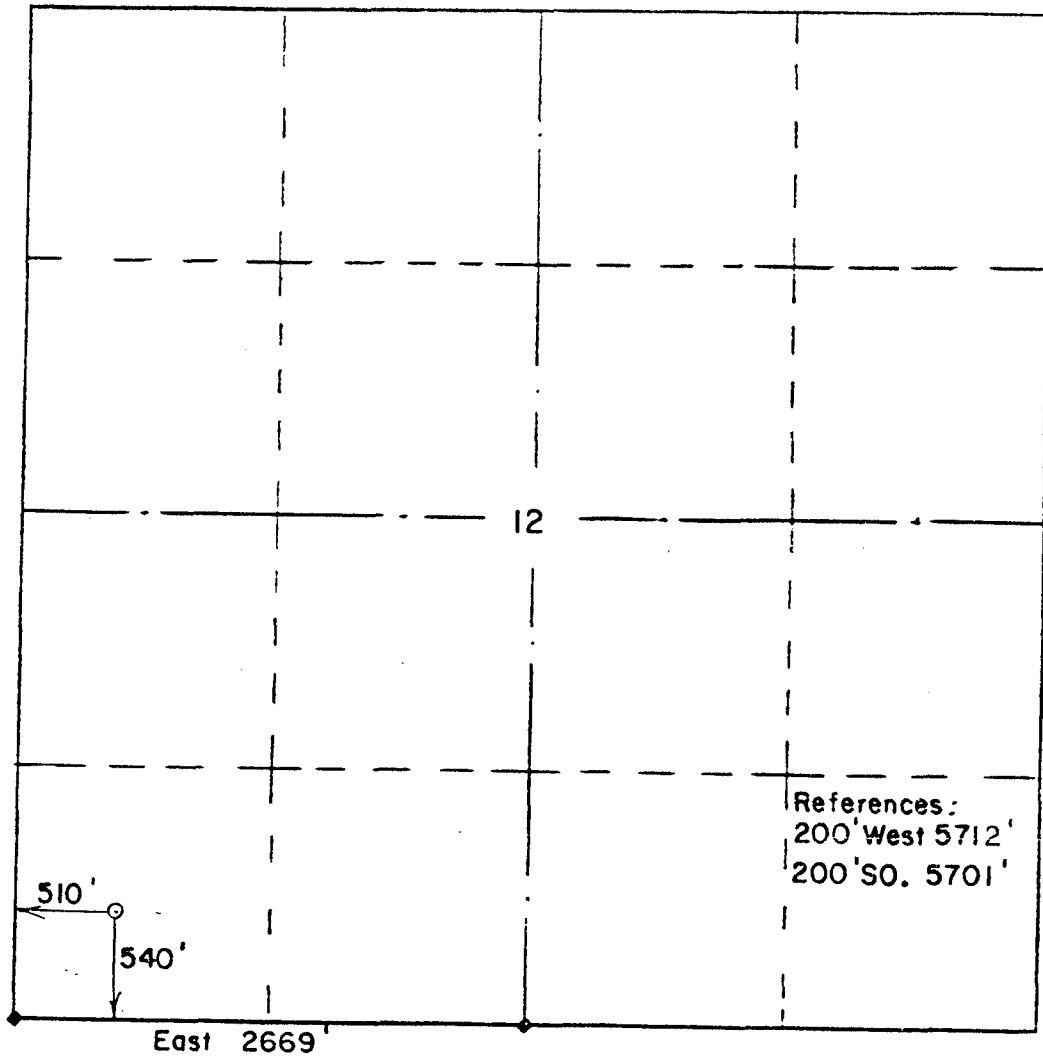
TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

WELL LOCATION AND ACREAGE DEDICATION PLAT



Operator CELSIUS ENERGY		Well name Sky Unit # 1	
Section 12	Township 38 South	Range 25 East	Meridian SLM
Footages 540' FS & 510' FW		County/State San Juan UT	Elevation 5705'est.gg.
Formation	Dedicated Acreage	Requested by Kathy Flansberg	
<p>The above plat is true and correct to the best of my knowledge and belief.</p> <p>11-11-'85</p> <p>No. 5705 GERALD C. HUDDLESTON, L.S. <i>Gerald C. Huddleston</i> STATE OF NEW MEXICO</p>			

DRILLING PLAN
Sky Unit Well No. 1
San Juan County, Utah
Celsius Energy Company

1&2. SURFACE FORMATION, ESTIMATED TOPS AND WATER, OIL, GAS OR MINERAL BEARING FORMATIONS:

Dakota	-	Surface
Morrison	-	155', possible minor coal beds
Entrada	-	1,020'
Carmel	-	1,180'
Navajo	-	1,205'
Chinle	-	1,965'
Shinarump	-	2,735', possible minor coal beds
Cutler	-	2,905', possible water flows
Honaker Trail	-	4,495', gas
Paradox	-	5,170'
Ismay	-	5,820'
Ismay Porosity	-	5,845', objective, oil and gas
Ismay Shale	-	6,000'
Lower Ismay	-	6,045'
"B" Zone Shale	-	6,100'
Desert Creek	-	6,120'
Lower Bench	-	6,160'
Desert Creek Por.	-	6,185', oil and gas
Salt	-	6,250', Halite
Total Depth	-	6,255'

All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth, cased and cemented. All oil and gas shows will be tested to determine commercial potential.

3. PRESSURE CONTROL EQUIPMENT: (See attached diagram)

Operator's minimum specifications for pressure control equipment requires an 11-inch 3000 psi double gate hydraulically operated blowout preventer and an 11-inch 3000 psi annular preventer. Surface casing and all preventer rams will be pressure tested to 2000 psi for 15 minutes. NOTE: The surface casing will be pressure tested to a minimum of 1000 psi; or one psi per foot; or 70 percent of the internal yield of the casing, whichever is applicable.

BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventor controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

4. CASING PROGRAM:

Feet	Size	Grade	Wt.	Condition	Thread	Cement
2015	9-5/8	K-55	36	New	8 rd ST&C	2015' of Regular Type G with 2% Calcium Chloride.
6255	7	K-55/ AR-95	26	New	8 rd LT&C	1000' above the uppermost producing zone with 50-50 Pozmix A.

AUXILIARY EQUIPMENT:

- a) Manually operated kelly cock
- b) No floats at bit
- c) Monitoring of mud system will be visual
- d) Full opening floor valve in the full open position, capable of fitting all drill string connections manually operated

5. MUD PROGRAM: Well will be drilled with a low water-loss light weight mud for sample quality and drill stem testing. After the B Zone Shale is penetrated, the mud weight will be increased to balance the 3300 to 3400 psi pressures that may be present in the Desert Creek Porosity.

Sufficient mud materials to maintain mud properties, control lost circulation and to contain blowout will be available at the wellsite.

No chrome constituent additives will be used in the mud system on Federal and Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.

6. CORING: One 60' core from 5835-5895', Ismay Formation

LOGGING: CNL-FDC-GR - total depth to base of surface casing, GR & CNL logged to surface
DI-SFL - total depth to base of surface casing
BHC - total depth to base of surface casing

TESTING: One DST in Honaker Trail Formation
Two DST's in the Ismay Formation
One DST in Desert Creek Formation

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analysis, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. If requested, samples (cuttings, fluids, and/or gases) will be submitted to the District Manager.

7. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURES AND POTENTIAL HAZARDS: Pressures at 3300 to 3400 psi are possible in the Desert Creek if porosity is present. BHT of 135° is anticipated. Lost circulation is possible although rare in the Morrison, Entrada and Navajo formations. No serious hole deviation problems are anticipated.
8. ANTICIPATED STARTING DATE: December 25, 1985

DURATION OF OPERATION: 18 Days Drilling

The operator will contact the San Juan Resource Area at 801-587-2201, 48 hours before beginning any dirt work.

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the San Juan Area Manager, a minimum of 24 hours before spudding. A Sundry Notice (Form 3160-5) will be sent within 24 hours after spudding, reporting the spud date and time. The Sundry will be sent to the District Manager. If the spudding is on a weekend or holiday, the Sundry will be submitted on the following regular work day.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329 "Monthly Report of Operations," starting with the month in which operations begin and continue each month until the well is physically plugged and abandoned. This report will be sent to the BLM District Office, P. O. Box 970, Moab, Utah 84532.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Resource Area in accordance with requirements of NTL-3A.

If a replacement rig is planned for completion operations, a Sundry Notice (Form 3160-5) to that effect will be filed, for prior approval of the District Manager. All conditions of this approved plan are applicable during all operations conducted with the replacement rig. In emergencies, verbal approval can be given by the District Petroleum Engineer.

If the well is successfully completed for production, then the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than five business days following the date on which the well is placed on production.

No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergencies, oral approval will be obtained from the District Petroleum Engineer. A "Subsequent Report of Abandonment"(Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration.

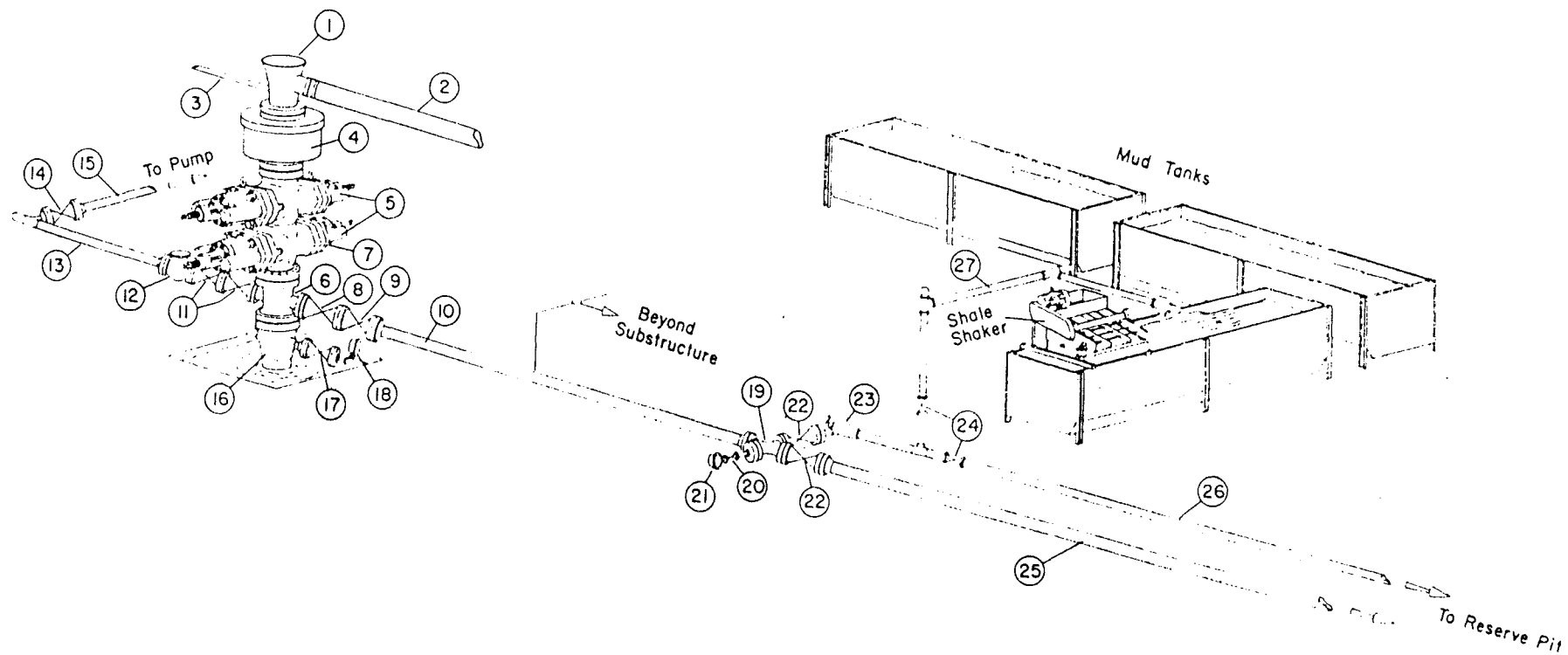
Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the San Juan Area Manager, or the appropriate surface manager.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The following information will be permanently beaded-on with a welding torch: Federal well number; location by quarter quarter section, township and range; and lease number.

A first production conference will be scheduled within 15 days after receipt of the first production notice. The San Juan Area Manager will schedule the conference.

CELSIUS/WEXPRO
3000 psi BLOWOUT PREVENTION EQUIPMENT



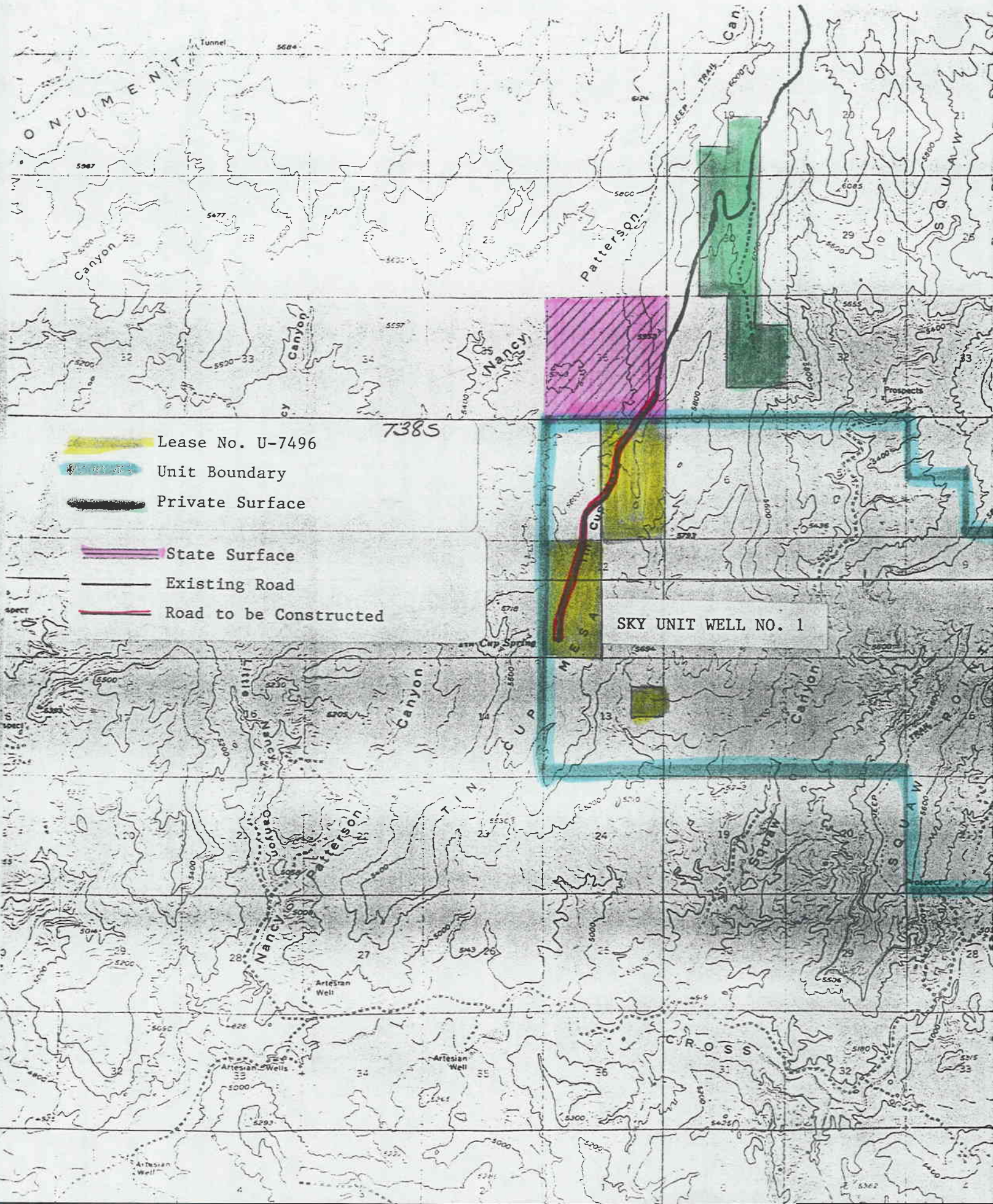
STANDARD STACK REQUIREMENTS

Nº	ITEM	NOMINAL	ID	TYPE	FURNISHED BY	
					OPER.	CONTR.
1	Drilling Nipple (Rotating Head when air drilling)					
2	Flowline					
3	Fill up Line (eliminated for air drilling)	2"				
4	Annular Preventer			Hydril Cameron Shaffer		
5	Two Single or One dual Hydril over rams.			H. ORC; F. EWS; B. F		
6	Drilling spool with 3" and 2" outlets			Forged		
7	As Alternate to (6) Run & Kill and Choke lines from outlets in this ram					
8	Gate Valve		3-1/8			
9	Valve-hydraulically operated (Gate)		3-1/8			
10	Choke Line	3"				
11	Gate Valves		2-1/16			
12	Check Valve		2-1/16			
13	Kill Line	2"				
14	Gate Valve		2-1/16			
15	Kill Line to Pumps	2"				
16	Casing Head					
17	Valve Gate _____ Plug _____		1-13/16			
18	Compound Pressure Cage					
	Wear Bushing					

STANDARD CHOKE AND KILL REQUIREMENTS

[illegible]

T375 R25E



OPERATOR Cubana Energy Co. DATE 12-16-85

WELL NAME Sky Fed. #1

SEC SWSW 12 T 38S R 25E COUNTY San Juan

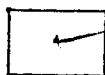
43-037-31235

API NUMBER

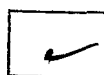
Fed.

TYPE OF LEASE

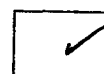
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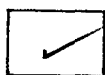
PLAT



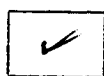
BOND



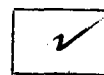
NEAREST
WELL



LEASE



FIELD



POTASH OR
GIL SHALE

PROCESSING COMMENTS:

No other well within 920'

Unit not approved - Cubana wants approved without unit

Need water permit

APPROVAL LETTER:

SPACING:

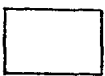


203

UNIT



302



CAUSE NO. & DATE



302.1

STIPULATIONS:

1 - Water



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

December 17, 1985

Celsius Energy Company
P. O. Box 458
Rock Springs, Wyoming 82902

Gentlemen:

Re: Well No. Sky Federal 1 - SW SW 12, T. 38S, R. 25E
540' FSL, 510' FWL - San Juan County, Utah

Approval to drill the above-referenced well is hereby granted in accordance with Rule 302, The Oil And Gas Conservation General Rules, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.
4. Compliance with the requirements and regulations of Rule 311.3, Associated Gas Flaring, General Rules.

Page 2
Celsius Energy Company
Well No. Sky Federal 1
December 17, 1985

5. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31235.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. J. Pirth', with a stylized flourish at the end.

R. J. Pirth
Associate Director, Oil & Gas

as
Enclosures
cc: Branch of Fluid Minerals

EXPRESS MAIL ROUTING SLIP

PAM
TAMI
VICKY
CLAUDIA
STEPHANE
CHARLES
RULA
MARY ALICE
CONNIE
MILLIE

1-27	2:30
1-27	0:45
	2:55
	3:46
1-27	4:04
CP 1-27	4:12
1-27	4:35
MAP 1-28	8:28
CD 1-28	8:47
MS 1-28	8:50

REVISED

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-7496
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME --
2. NAME OF OPERATOR Celsius Energy Company		7. UNIT AGREEMENT NAME Sky
3. ADDRESS OF OPERATOR P. O. Box 458, Rock Springs, WY 82902		8. FARM OR LEASE NAME Unit
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface SW SW, 200' FSL, 950' FWL At proposed prod. zone		9. WELL NO. 1
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Approximately 7 miles northeast of Hatch Trading Post		10. FIELD AND POOL, OR WILDCAT Wildcat
10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 200'	16. NO. OF ACRES IN LEASE 679.81	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 12-38S-25E
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. None	19. PROPOSED DEPTH 6,255'	12. COUNTY OR PARISH San Juan
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5691' GR		13. STATE Utah
23. PROPOSED CASING AND CEMENTING PROGRAM		17. NO. OF ACRES ASSIGNED TO THIS WELL 160
		20. ROTARY OR CABLE TOOLS Rotary
		22. APPROX. DATE WORK WILL START* March 1, 1986

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4	9-5/8	36	2,015'	2,015' Regular Type G w/2% CaCl 1000' above uppermost producing zone with 50-50 Pozmix A
8-3/4	7	26	6,255'	

See drilling plan.

RECEIVED

JAN 23 1986

DIVISION OF OIL
GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED A. J. Mauer TITLE Drilling Superintendent DATE January 16, 1986
(This space for Federal or State office use)

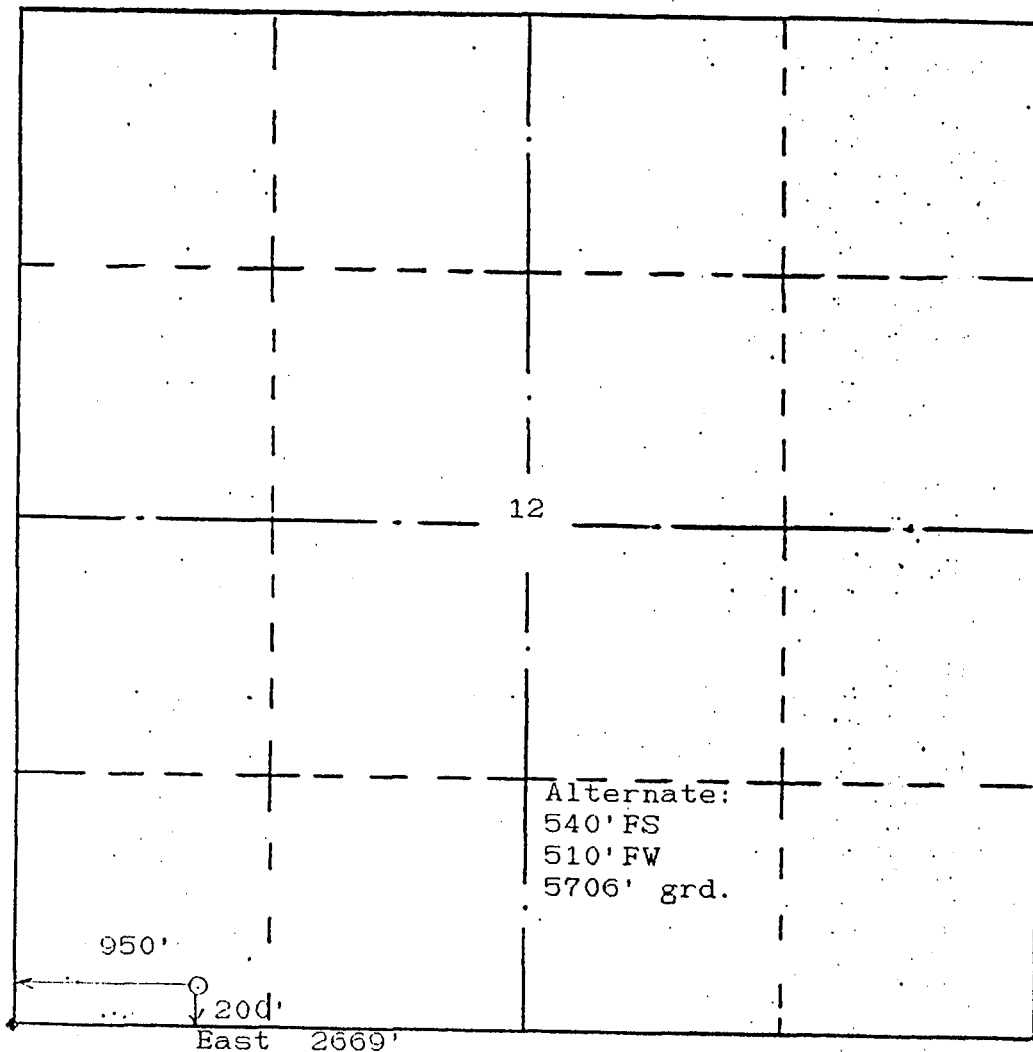
PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY: _____

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

WELL LOCATION AND ACREAGE DEDICATION PLAT



LOCATION DESCRIPTION:

CELSIUS ENERGY CO.

SKY UNIT # 1

200' FS & 950' FW

SECTION 12, T.38 S., R.25 E., SLM

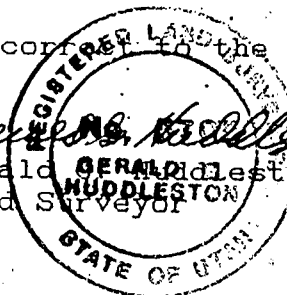
SAN JUAN COUNTY, UTAH

5691' ESTIMATED GRADED GROUND

10 JANUARY 1986

The above plat is true and correct to the best of my knowledge and belief.

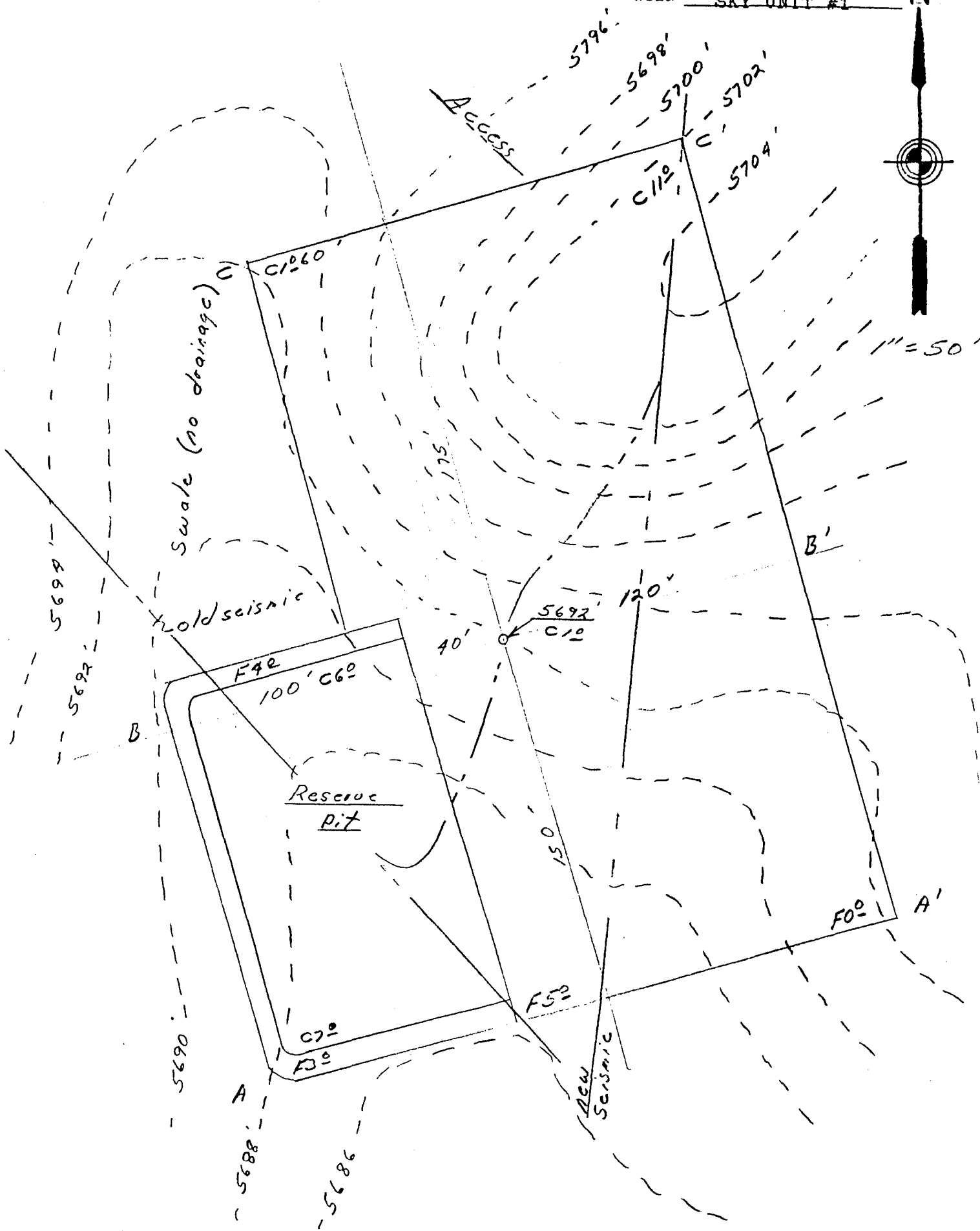
Gerald Huddleston
Land Surveyor



WELL PAD PLAN VIEW

Well SKY UNIT #1

N



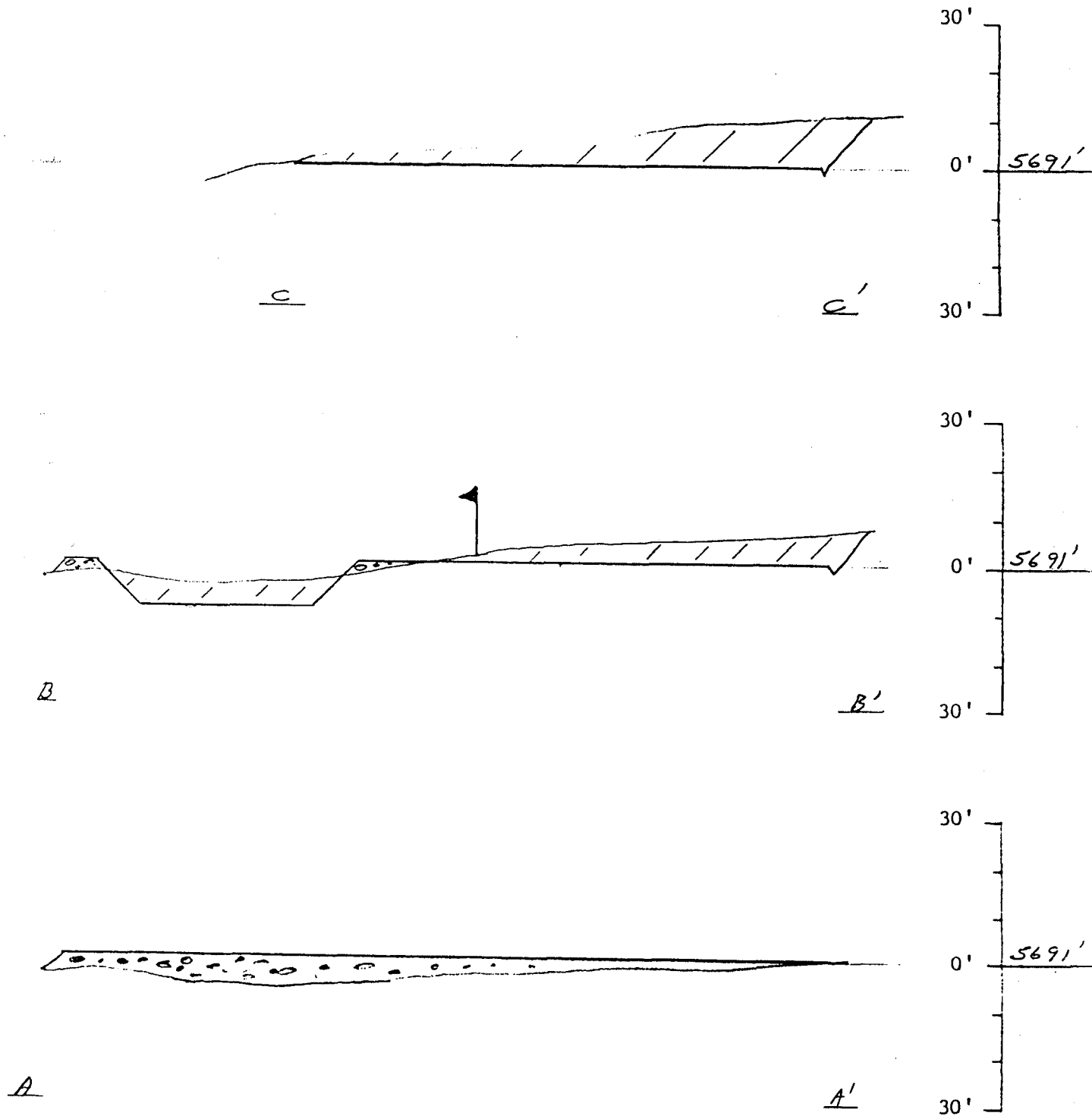
WELL PAD CROSS-SECTION

Well SKY UNIT #1

Cut /////
Fill

Scales: 1"=50' H.
1"=30' V.

1.7 Vertical Exaggeration



UNITED STATES
DEPARTMENT OF THE INTERIOR
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See drilling plan.

RECEIVED
JUN 04 1986

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OIL, GAS & MINING

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24. SIGNED *A. J. Mauer* TITLE Drilling Superintendent DATE January 16, 1986
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY Kenneth V. Rhea TITLE Acting DISTRICT MANAGER DATE JUN 02 1986
CONDITIONS OF APPROVAL, IF ANY: _____

SUBJECT TO RIGHT OF WAY CONDITIONS OF APPROVAL ATTACHED
APPROVAL

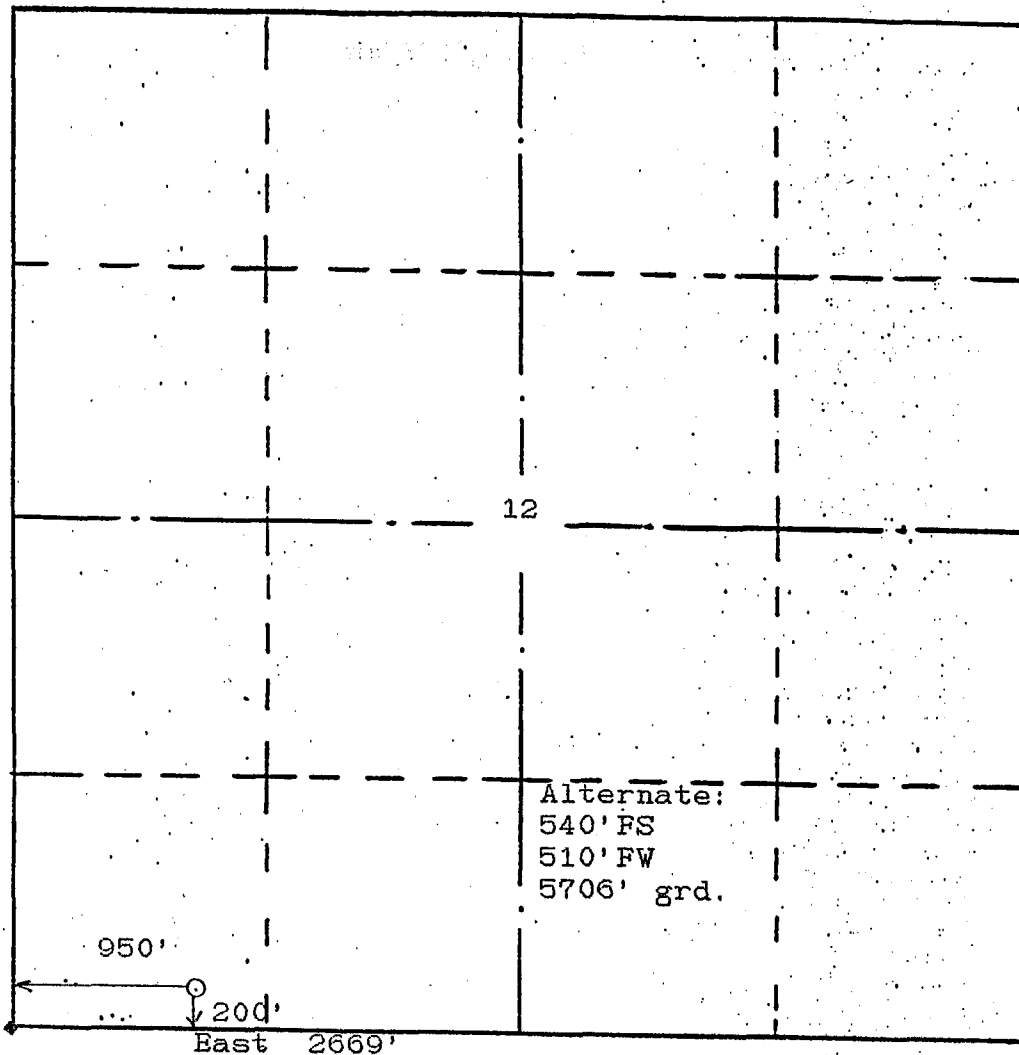
FLARING OR VENTING OF
GAS IS SUBJECT OF NTL 4-A
DATED 1/1/80

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

STATE OF UTAH: DOGM

WELL LOCATION AND ACREAGE DEDICATION PLAT



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CELSIUS ENERGY CO.

SKY UNIT # 1

200' FS. & 950' FW

SECTION 12, T.38 S., R.25 E., SLM

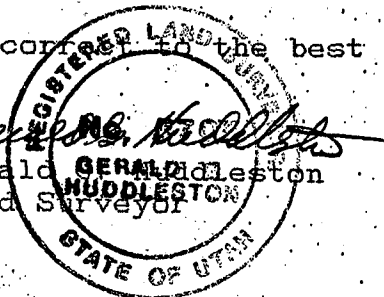
SAN JUAN COUNTY, UTAH

5691' ESTIMATED GRADED GROUND

10 JANUARY 1986

The above plat is true and correct to the best of my knowledge and belief.

Gerald Muddleston
Land Surveyor



070708

Water Permit
09-1416
(T60756)

DIVISION OF OIL, GAS AND MINING

SPODDING INFORMATION

API #43-037-31235

NAME OF COMPANY: CELSIUS ENERGY

WELL NAME: SKY UNIT #1

SECTION SW SW 12 TOWNSHIP 38S RANGE 25E COUNTY San Juan

DRILLING CONTRACTOR Shelby

RIG # 11

SPODDED: DATE 6-28-86

TIME 7:00 AM

HOW Rotary

DRILLING WILL COMMENCE

REPORTED BY Shirley

TELEPHONE # (307) 382-9791

DATE 6-30-86 SIGNED AS

COMPANY

LEASE AND WELL NAME #

DATE OF TEST

RIG # AND NAME

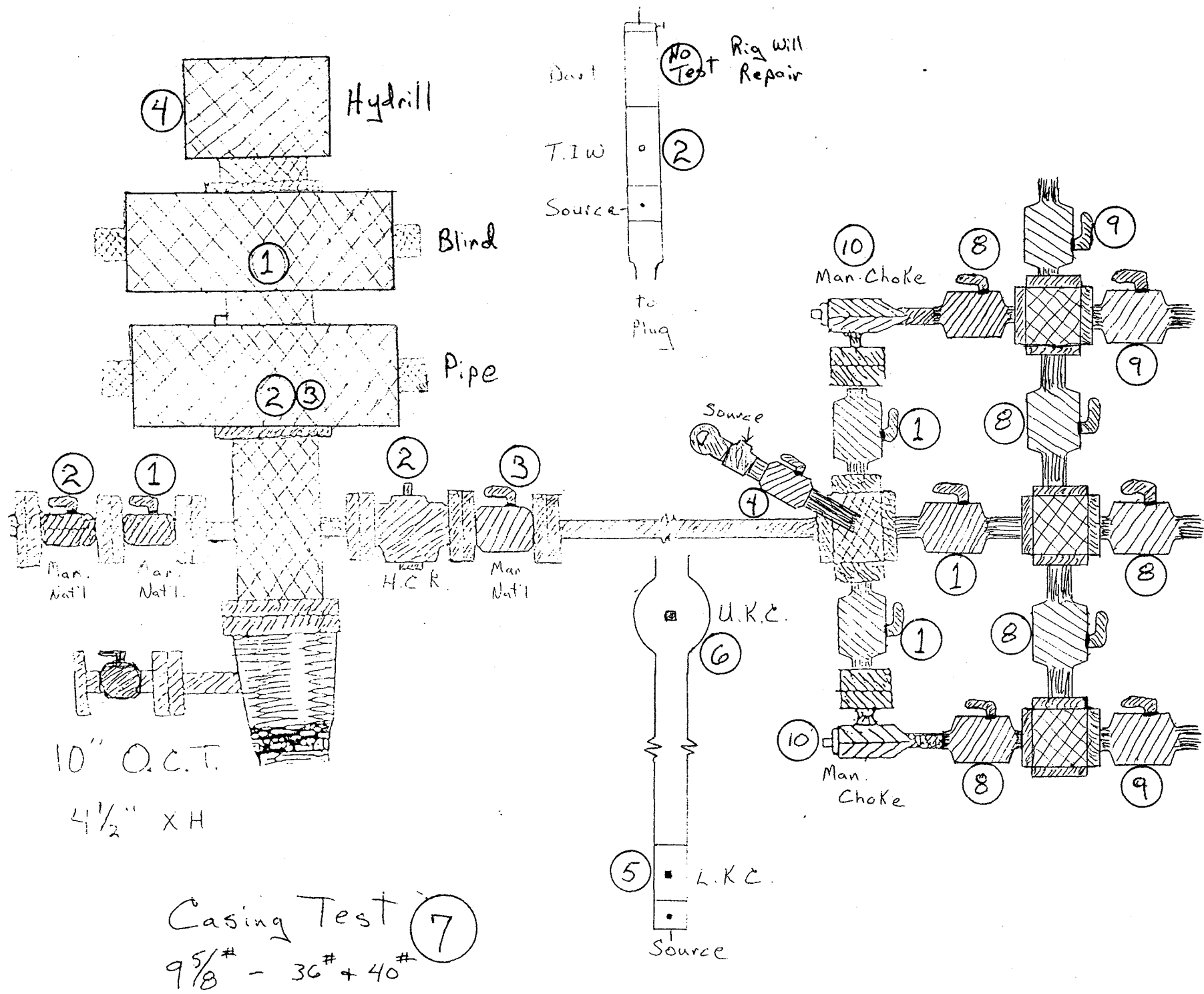
Celsius

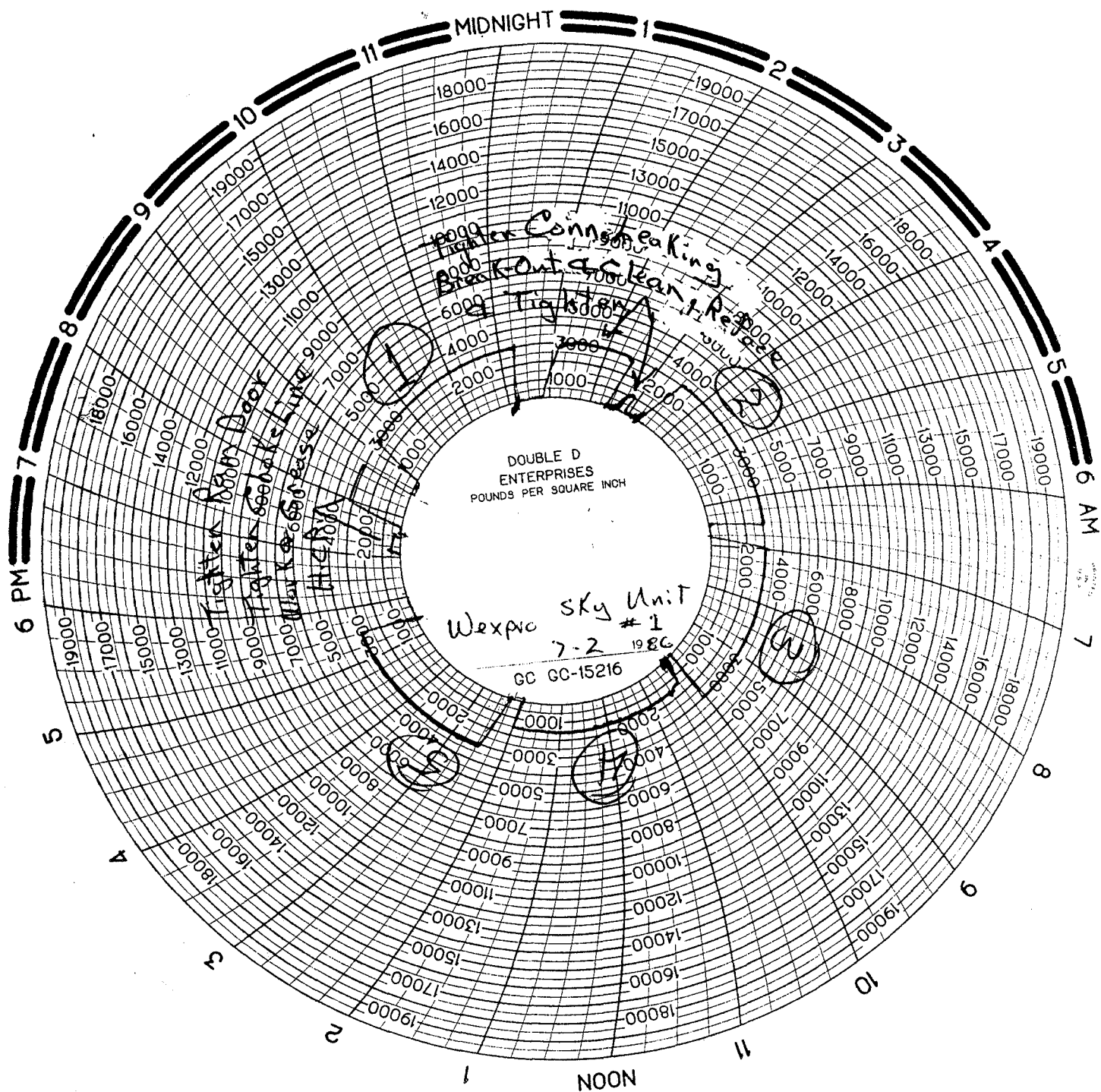
SKy Unit # 1

7-2-86

Shelby # 11E

ST#	TIME	
		Load Out & Travel to location
		Unload Plug & Subs, Tie in Choke Man, Work All Rams.
		Attempt test #1, - Tighten Choke line Flange,
		Work & Grease H.C.A., Tighten Ram Area Seal
①	6:55-7:10	3000 P.S.I. - Blind Rams, 1st Man Valve Kill line & Inside Valves on Choke Manifold.
		W/D.P. up Jt. Make-up Circ. Sub, T.I.W, & Dart.
		& Screw into Plug & Set Valves
		Attempt test #2 - Conn. leaking - Tighten - No Go
		Break-out Conn. - Clean, Reface, & Tighten
②	8:25-8:40	3000 P.S.I. - Pipe Rams, 2nd Man Valve Kill line, H.C.A. Valve, & T.I.W.
		Switch Valves & Attempt test #3, Dart Leaking
		Work, Flush, & Surge Dart (No Test on Dart)
③	9:30-9:45	3000 P.S.I. - Pipe Rams, Manual Valve Choke line,
		Switch Valves & Work Hydril
④	9:55-10:10	1500 P.S.I. - Hydril, & Riser Valve in Choke Man.
		Pull Plug, Drain B.O.P.'s, Set Valves
		Pick-up Kelly & Rig to Test Same
⑤	10:45-11:00	3000 P.S.I. - Lower Kelly Cock. (During Kelly Test)
		open L.K.C. & Fill Kelly to Test Upper. (Dart No Go) Rig will Repair
⑥	11:05-11:20	3000 P.S.I. - Upper Kelly Cock.
		Rig Down F/ Kelly Test & Break-out Subs
		Rig to test Casing, Close Blinds, & Tie In.
⑦	11:50-12:05	1000 P.S.I. - Casing Test
		Bleed Down F/ Test, Re Set B.O.P. Valves
		Switch Valves & Test Choke Manifold
⑧	12:20-12:35	3000 P.S.I. - 2nd Set Valves on Choke Man.
		Switch Valves
⑨	12:40-12:55	3000 P.S.I. - Outside Valves Choke Man.
		open Valves & Close Manual Chokes
⑩	1:00-1:10	800 P.S.I. - Manual Choke Safety ✓
		Rig down F/ch. Man. Drain & Set Valves
		Spool-up & Load-out, & Run Accumulator ✓
		Make Out Test Ticket
		Travel to Shop & Clean Unit
		Make out Test Report





MIDNIGHT

DOUBLE D
ENTERPRISES
POUNDS PER SQUARE INCH

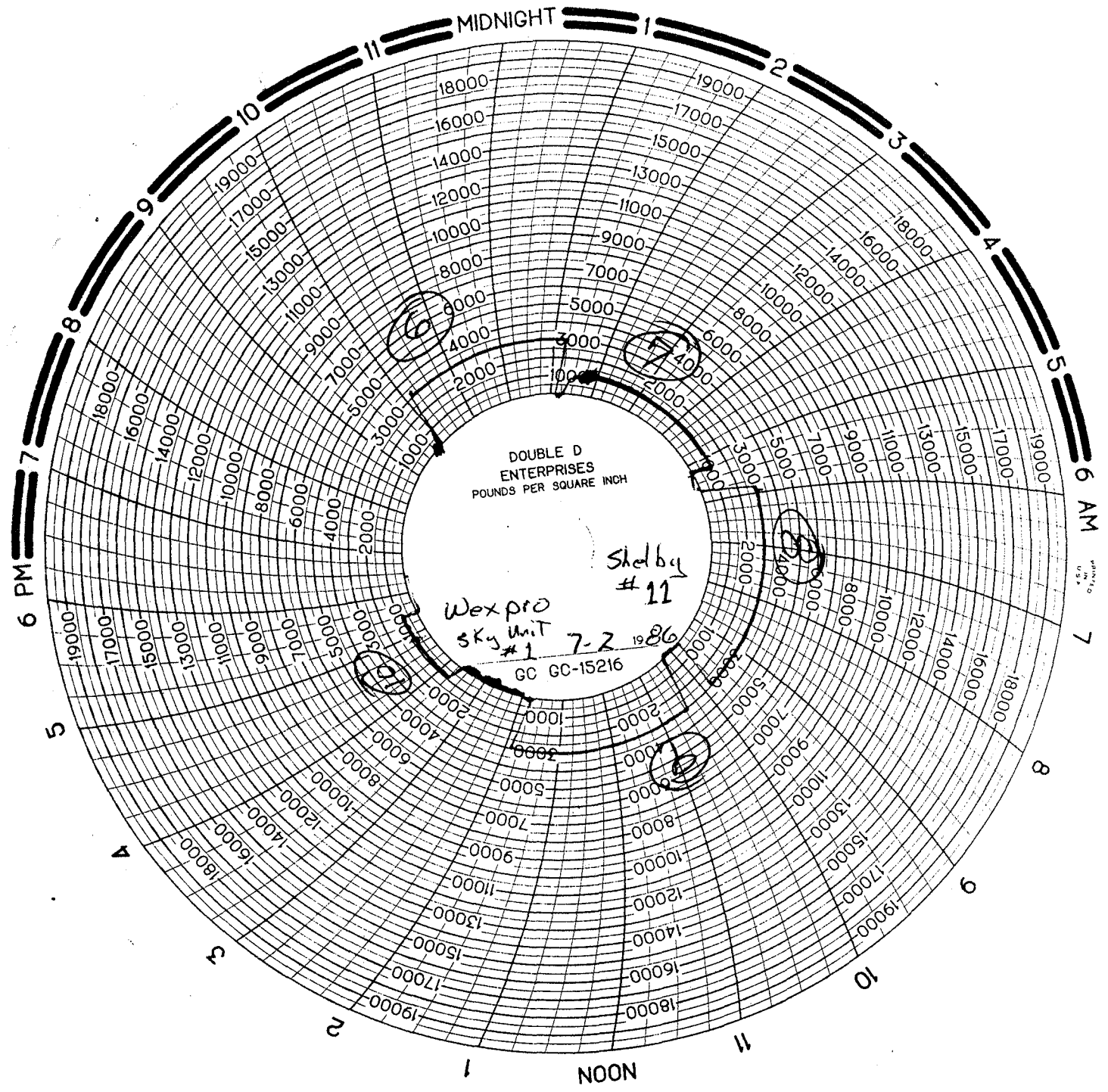
Shelby
#11

Wexpro
sky unit
#1 7-2 1986
GC GC-15216

NOON

6 AM
7
8
9
10
11

6 PM
7
8
9
10
11



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPL
(Other instructions
verse side)

070904

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

U-7496

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Sky

8. FARM OR LEASE NAME

Unit

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Sky Unit - Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

12-38S-25E

12. COUNTY OR PARISH 13. STATE

San Juan

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1.

OIL WELL ☒ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

Celsius Energy Company

3. ADDRESS OF OPERATOR

P. O. Box 458, Rock Springs, WY 82902

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

SW SW, 200' FSL, 950' FWL

14. PERMIT NO.

43-037-31235

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

GR 5691'

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANS

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other) Supplemental History

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Spudded 7:00 am 6-28-86.

Depth 1368'.

Drilling.

RECEIVED
JUL 03 1986

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED

C. J. Maser

TITLE

Drilling Superintendent

DATE

6-30-86

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Celsius Energy Company
Well No. Sky Unit 1
Sec. 12, T. 38 S., R. 25 E.
San Juan County, Utah
Lease U-7496

CONDITION OF APPROVAL

1. The cementing of the surface casing and/or any B.O.P.E. tests may be witnessed by a Bureau of Land Management Petroleum Technician. Mike Wade of the Bureau of Land Management, San Juan Resource Area Office, will be notified 24 hours in advance at work (801) 587-2201 or home (801) 587-2026.

071007

DOUBLE "D" ENTERPRISES

RECEIVED
JUL 09 1986

SUG.

B.O.P. Test Report

DIVISION OF
OIL, GAS & MINING

43-037-31235

B.O.P. TEST PERFORMED ON (DATE)..... July 2, 1986

OIL CO: Celsius Energy Company

WELL NAME & NUMBER..... Sky Unit #1

SECTION 12

TOWNSHIP 38S

RANGE 25E

COUNTY San Juan

DRILLING CONTRACTOR..... Shelby #11

INVOICES BILLED FROM: DOUBLE "D" ENTERPRISES, INC.
213 Pine Street - Box 560
Shoshoni, Wyoming 82649
Phone: (307) 876-2308 or (307) 876-2234TESTED BY: DOUBLE "D" ENTERPRISES, INC.
Box 2097
Evanston, Wyoming 82930
Phone: (307) 789-9213 or (307) 789-9214

OIL CO. SITE REPRESENTATIVE..... Howard Leeper

RIG TOOL PUSHER.....

TESTED OUT OF..... Evanston, Wyoming

NOTIFIED PRIOR TO TEST: Mike Wade / B.L.M. witnessed test

COPIES OF THIS TEST REPORT SENT COPIES TO: Site Representative

Utah Oil & Gas

B.L.M.

Celsius / Rock Springs

ORIGINAL CHART & TEST REPORT ON FILE AT: Evanston OFFICE

DOUBLE "D" ENTERPRISES, INC.

P.O. Box 560
Shoshoni, Wyoming 82649
307-876-2308

DELIVERY TICKET

No 4484

Date 7-2-86

Operator Celsius Energy Contractor Shelby Dalg. Rig No. #11

Ordered By Howard Lease SKY Unit Well No. #1

County San Juan Section 12 Township 38 S Range 25 E

Items Tested:

	Low Test	Time Held	High Test	Time Held	Comments
Top Pipe Rams	—	—	—	—	—
Bottom Pipe Rams	—	—	3000	15 min.	O.K.
Blind Rams	—	—	3000	15 min.	O.K.
Annular B.O.P.	—	—	1500	15 min.	O.K.
Choke Manifold	—	—	3000	15 min.	O.K.
Choke Line	—	—	3000	15 min.	O.K.
Kill Line	—	—	3000	15 min.	O.K.
Super Choke	—	—	—	—	—
Upper Kelly	—	—	3000	15 min.	O.K.
Lower Kelly Floor Valve	—	—	3000	15 min.	O.K.
Floor Valve	—	—	3000	15 min.	O.K.
Dart Valve	—	—	No Test	"	Rig will Repair
9 5/8" Casing	—	—	1000	15 min.	O.K.
36" & 40" Closing Unit Psi	3000		Closing Time of Rams	4 sec.	Closing Time of Hydril 14 sec

Closed Casing Head Valve Yes Set Wear Sleeve N/A

Comments Run Manual Choke Satty ✓, and

Accumulator Test ✓, & Set Valves

Notes Bottom Choke

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**CORE LABORATORIES, INC.***Petroleum Reservoir Engineering*

COMPANY CELSIUS ENERGY COMPANY FILE NO. 38030-003451
 WELL SKY UNIT NO. 1 DATE 12-JUL-86 ENGRS. DS;SP
 FIELD WILDCAT FORMATION PARADOX ELEV. 5709 KB
 COUNTY SAN JUAN STATE UTAH DRLG. FLD. WBM CORES

CoRes Log

CORE and RESISTIVITY EVALUATION

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted) but Core Laboratories, Inc. and its officers and employees assume no responsibility and make no warranty or representations as to the productivity, proven operation, or profitability of any oil, gas or other minerals well or sand in connection with which such report is used or relied upon.

RESISTIVITY PARAMETERS: $a = 1.0$ $m = 2.0$ $n = 2.0$ Depths 5890.0 to 5934.0
 $a =$ $m =$ $n =$ Depths to

PERMEABILITY
MILLIDARCIES

CORE ANALYSIS CALCULATED RESISTIVITY

 R_0 = OHM-METERS AT 100% S_w R_{mp} = OHM-METERS AT CRITICAL S_w DEPTH
FEET

1000 100 10 1.0 0.1 0.01

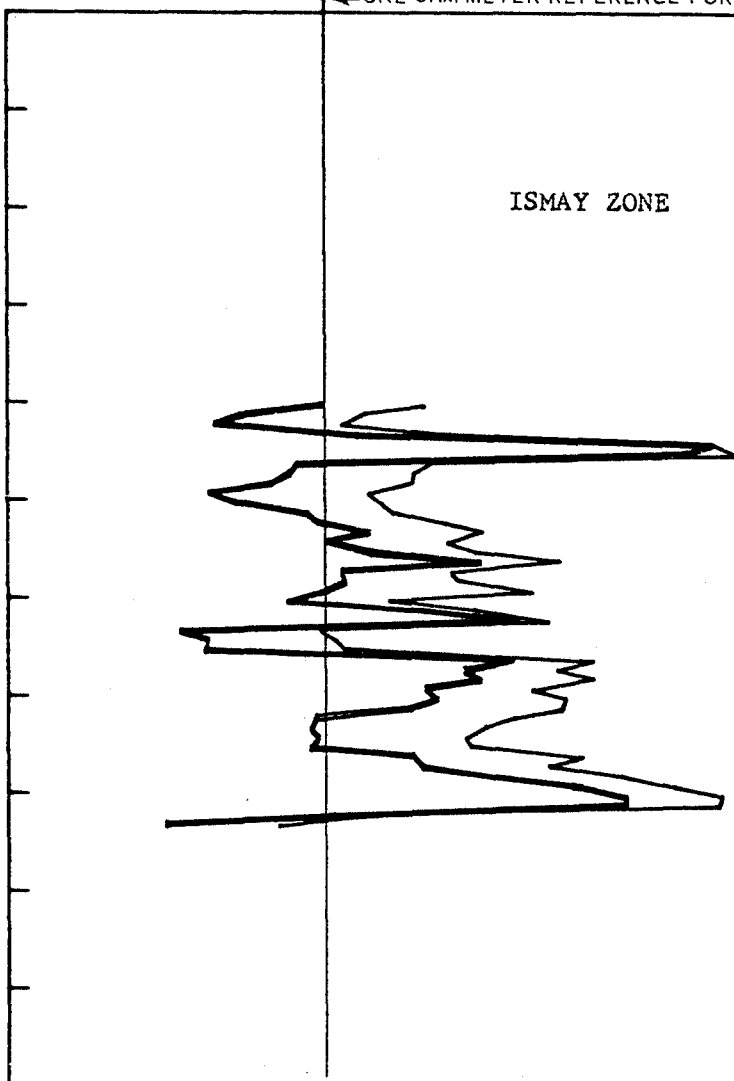
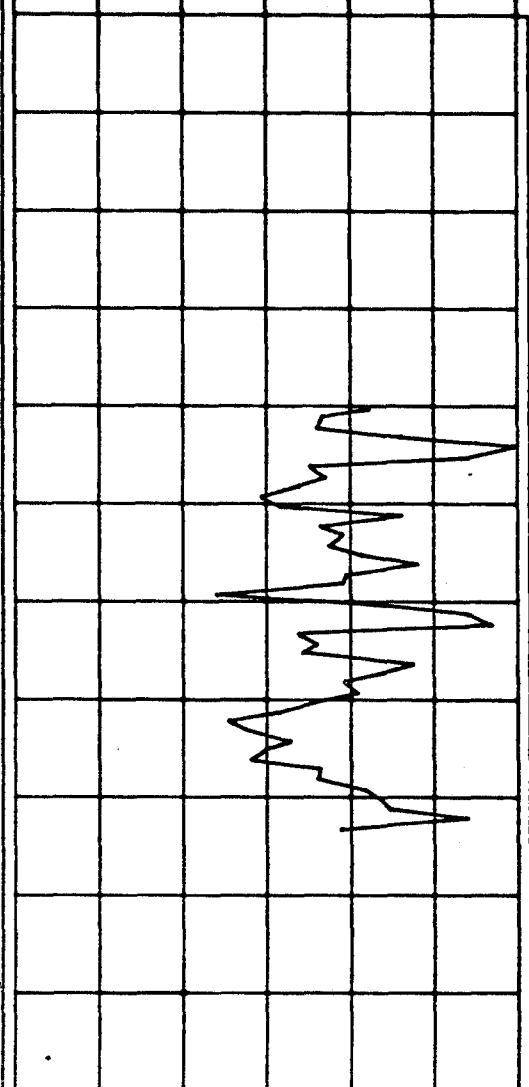
5850

5900

5950

← ONE OHM-METER REFERENCE FOR $R_w = 0.01$

ISMAY ZONE



CORE LABORATORIES, INC.*Petroleum Reservoir Engineering*COMPANY CELSIUS ENERGY COMPANYFILE NO. 38030-003451WELL SKY UNIT NO. 1DATE 12-JUL-86FIELD WILDCATFORMATION PARADOXELEV. 5700 KBCOUNTY SAN JUAN STATE UTAHDRLG. FLD. WBM

CORES _____

LOCATION SW, SW SEC. 12-T38S-R25E**CORRELATION COREGRAPH**

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc., (all errors or omissions excepted); but Core Laboratories, Inc., and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

VERTICAL SCALE: 5" = 100'

Total Water _____

PERCENT PORE SPACE

100 80 60 40 20 0

Gamma Ray

RADIATION INCREASE →

PARADOX FORMATION**Permeability** _____

MILLIDARCIES

100 10 1.0 .1

Depth
Feet 30**Porosity** _____

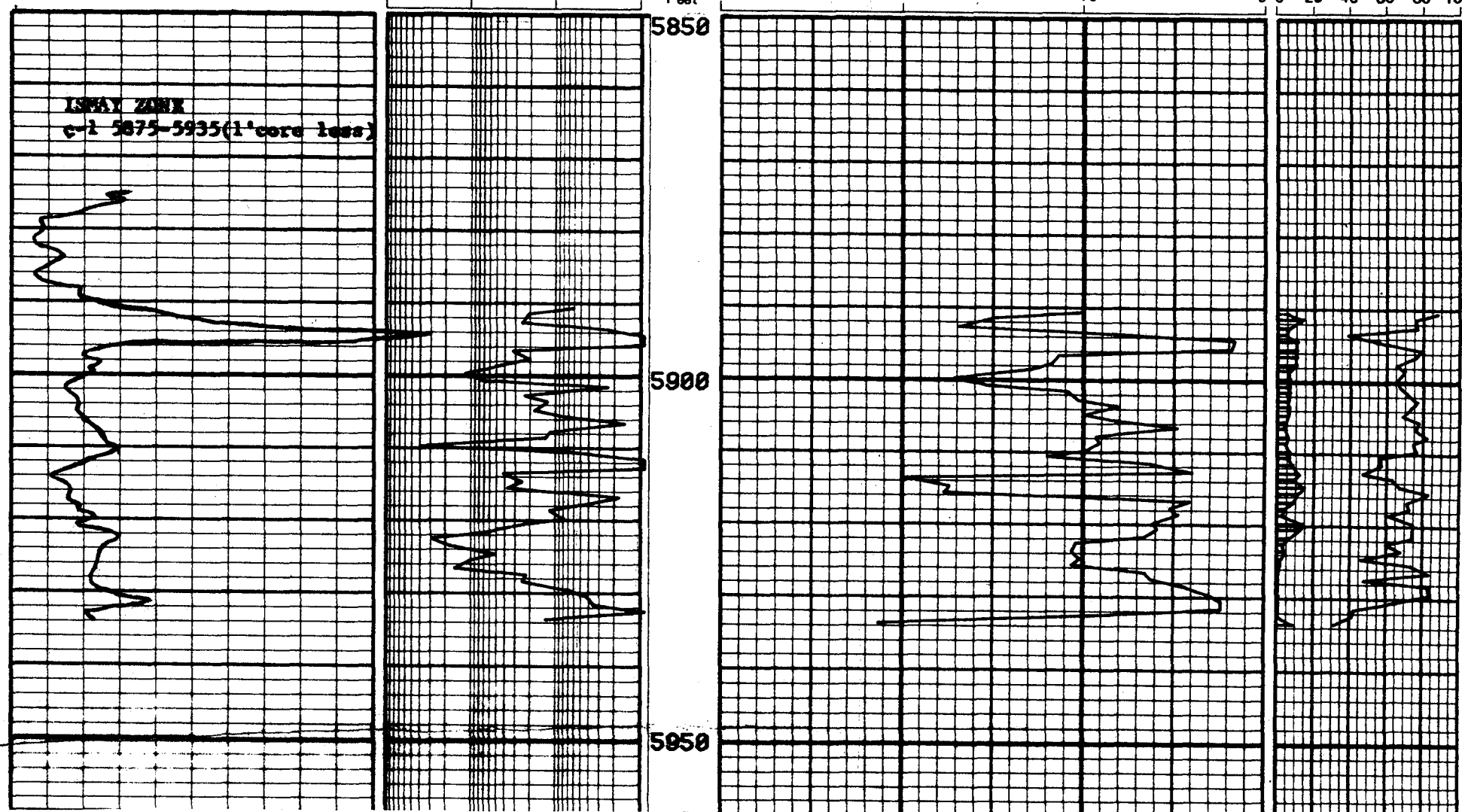
PERCENT

20 10

Oil Saturation ☐

PERCENT PORE SPACE

0 0 20 40 60 80 100



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions
on reverse side)

071806

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

U-7496

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Sky

8. FARM OR LEASE NAME

Unit

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Sky Unit - Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

12-38S-25E

12. COUNTY OR PARISH 13. STATE

San Juan

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1.

OIL WELL ☒ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

Celsius Energy Company

3. ADDRESS OF OPERATOR

P. O. Box 458, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (Report location clearly and in accordance with applicable requirements.*
See also space 17 below.)

At surface

SW SW, 200' FSL, 905' FWL

14. PERMIT NO.

43-037-31235

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

GR 5691'

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANS

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other) Supplemental History

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Depth 6231'.

Running logs.

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Asst. Drilling Supt.

DATE 7-14-86

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions
verse side)

072818

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

U-7496

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Sky

8. FARM OR LEASE NAME

Unit

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Sky Unit - Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

12-38S-25E

12. COUNTY OR PARISH 13. STATE

San Juan

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1.

OIL WELL ☒ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

Celsius Energy Company

3. ADDRESS OF OPERATOR

P. O. Box 458, Rock Springs, Wyoming 82902

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

SW SW, 200' FSL, 950' FWL

14. PERMIT NO.

43037031235

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

GR 5691

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

Supplemental History

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The above captioned well was drilled to a total depth of 6231' KBM. The well had 9-5/8", 36# surface casing set at 2018' KBM. The well tested in the Ismay formation but was found to be unproductive. The well was plugged in the following manner. Verbal approval was given by Greg Noble of the Moab District.

Plug No. 1 - 6107-6207' - 50 sacks of cement across the Desert Creek Top.
Plug No. 2 - 5808-5908' - 50 sacks of cement across the Ismay Top.
Plug No. 3 - 1974-2074' - 50 sacks of cement across the surface casing shoe.
Plug No. 4 - 0-50' - 35 sacks of cement at surface.

Will install dry hole marker and will reclaim location when possible.

RECEIVED
JUL 21 1986

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Director Pet. Engrg.

DATE July 15, 1986

(This space for Federal or State office use)

APPROVED BY

TITLE

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

DATE 7-25-86
BY: [Signature]

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

(See other In-
structions on
reverse side)

072804

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

13

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL:		OIL WELL <input type="checkbox"/>	GAS WELL <input type="checkbox"/>	DRY <input checked="" type="checkbox"/>			
b. TYPE OF COMPLETION:		NEW WELL <input checked="" type="checkbox"/>	WORK OVER <input type="checkbox"/>	DEEP-EN <input type="checkbox"/>	PLUG BACK <input type="checkbox"/>	DIFF. REVR. <input type="checkbox"/>	
2. NAME OF OPERATOR Celsius Energy Company							
3. ADDRESS OF OPERATOR P. O. Box 458, Rock Springs, Wyoming 82902							
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface SW SW, 200' FSL, 950' FWL At top prod. interval reported below At total depth							
14. PERMIT NO. 43-037-31235				DATE ISSUED JUL 21 1985			
15. DATE SPUDDED 6-28-86		16. DATE T.D. REACHED 7-14-86		17. DATE COMPL. (Ready to prod.) --		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* GR 5691	
20. TOTAL DEPTH, MD & TVD 6231		21. PLUG, BACK T.D., MD & TVD 0 -		22. IF MULTIPLE COMPL., HOW MANY* --		23. INTERVALS DRILLED BY ROTARY TOOLS X	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* None - The well was plugged and abandoned.						25. WAS DIRECTIONAL SURVEY MADE Yes	
26. TYPE ELECTRIC AND OTHER LOGS RUN CNL-FDC, DIL, Caliper, GR, Sonic						27. WAS WELL CORED Yes	
28. CASING RECORD (Report all strings set in well)							
CASING SIZE 9-5/8	WEIGHT, LB./FT. 36	DEPTH SET (MD) 2018	HOLE SIZE 12-1/4	CEMENTING RECORD 575 sacks Pacesetter lite		AMOUNT PULLED None	
29. LINER RECORD							
SIZE --	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	30. TUBING RECORD		
					SIZE --	DEPTH SET (MD) PACKER SET (MD)	
31. PERFORATION RECORD (Interval, size and number) NA				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
				DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED		
33.* PRODUCTION							
DATE FIRST PRODUCTION --		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)						TEST WITNESSED BY	
35. LIST OF ATTACHMENTS							
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records							
SIGNED <u>Thomas M. [Signature]</u>			TITLE <u>Director Pet. Engrg.</u>		DATE <u>July 15, 1986</u>		

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Ismay, DST #1	5890'	5935'	IO 30 min, ISI, 90 min, FO 240 min, FSI 360, opened weak, increased to bottom of bucket. Reopened weak, gas to surface in 48 min, NETG. Recovered 450' gas cut mud, 2000' gas cut water. Sample chamber 100 cc oil, 2000 cc water. IOFP's 332/358, ISIP 2434 psi, FOFP's 397/1243, FSIP 2420 psi. Core data will be sent to the BLM upon completion of the core analysis.	Honaker Trail Upper Ismay Desert Creek Desert Creek Porosity	4809' 5858' 6100' 6170'	
Ismay Core						

38. GEOLOGIC MARKERS

072901

RECEIVED
JUL 21 1986

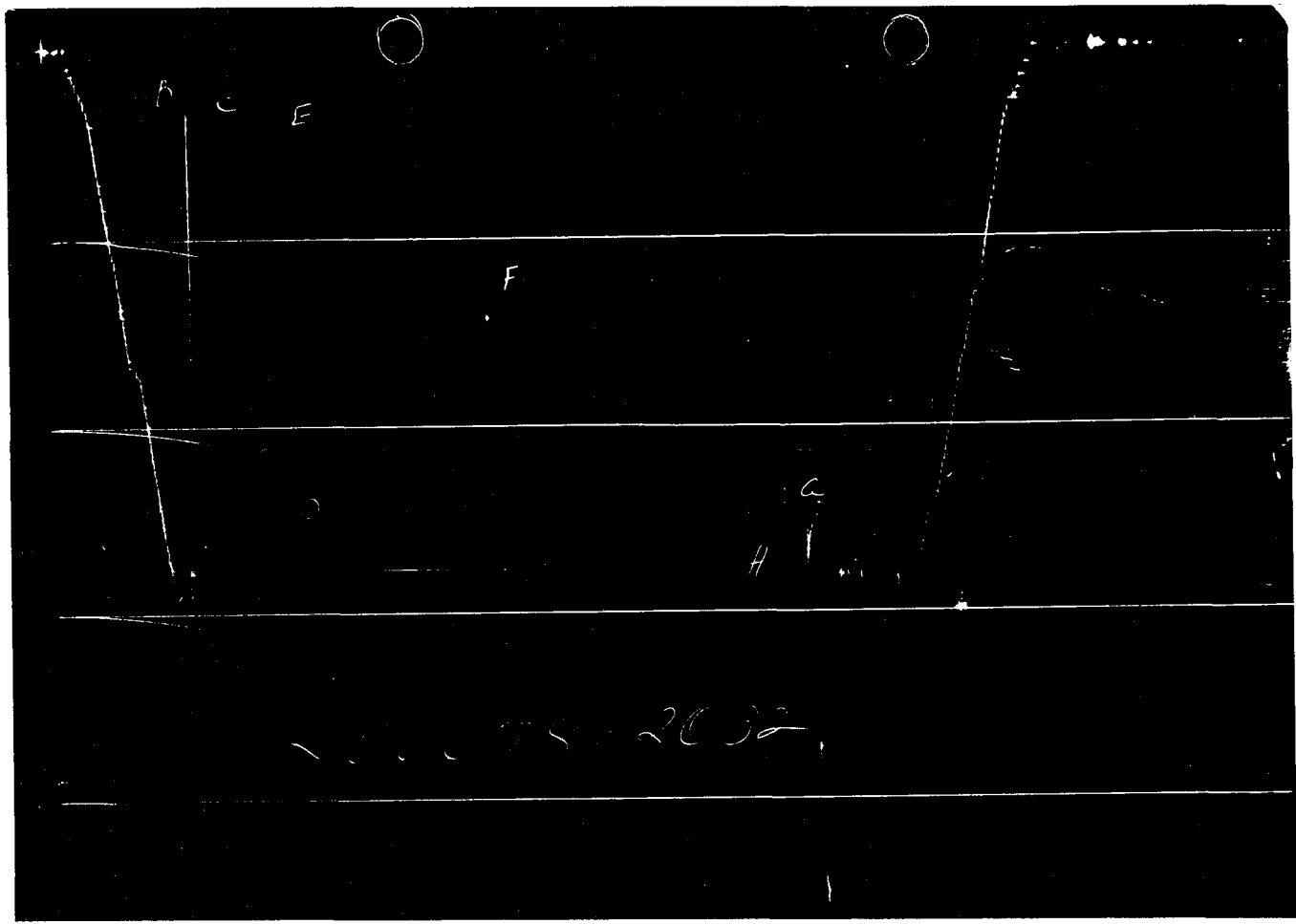
DIVISION OF
OIL, GAS & MINING



TICKET NO. 40667800
17-JUL-86
FARMINGTON

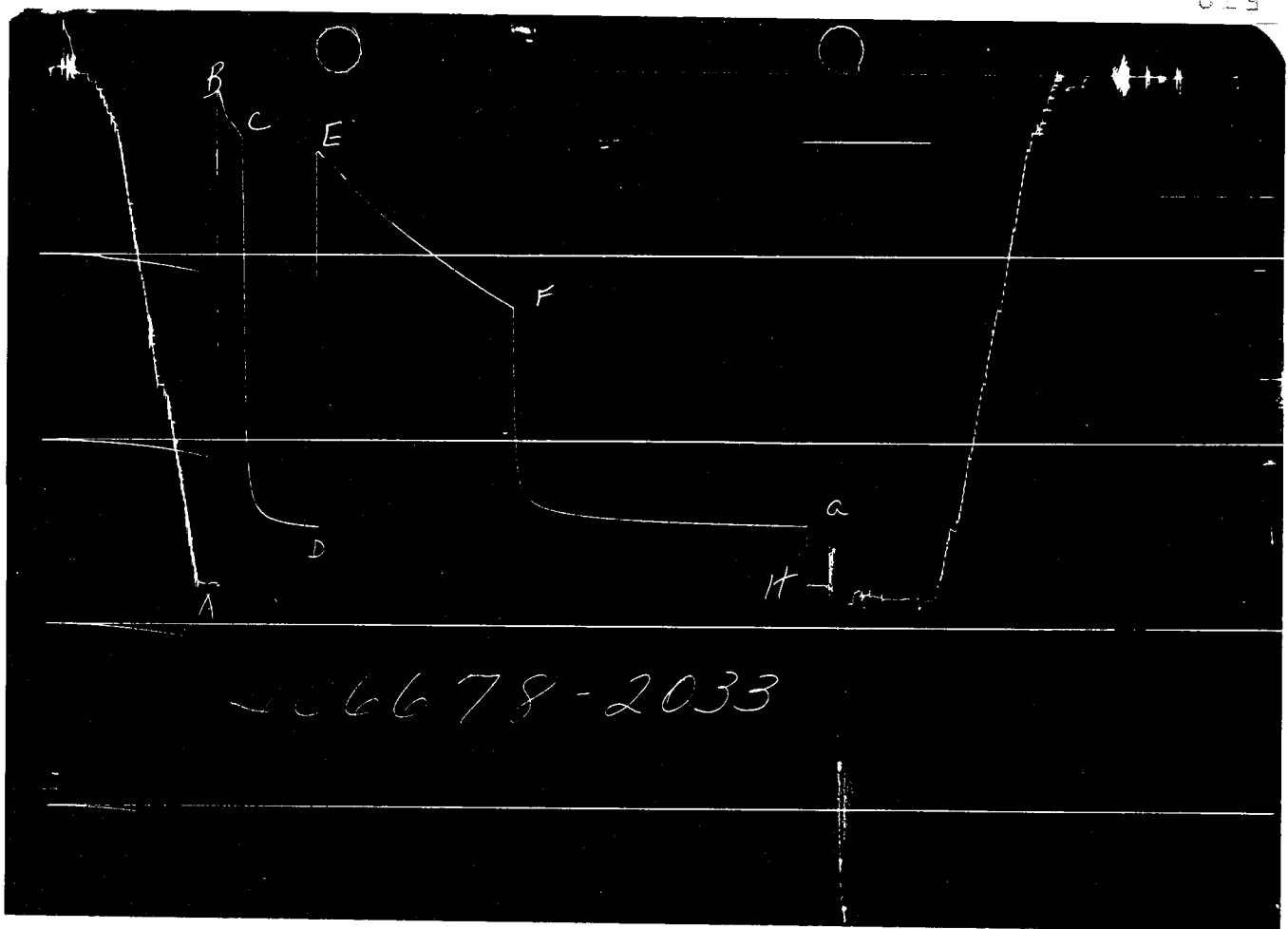
FORMATION TESTING SERVICE REPORT

LEGAL LOCATION		WELL NO.		TEST NO.		FIELD AREA		COUNTY		STATE	
SEC. - TWP. - RNG.		1		1		WILDCAT		SAN JUAN		UTAH	
LEASE NAME		5888.0 - 5935.0		TESTED INTERVAL		LEASE OWNER/COMPANY NAME					
SKY UNIT											



GAUGE NO: 2032 DEPTH: 5868.0 BLANKED OFF: NQ HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2778	2773.0			
B	INITIAL FIRST FLOW	332	96.1			
C	FINAL FIRST FLOW	358	353.8	30.0	30.6	F
C	INITIAL FIRST CLOSED-IN	358	353.8			
D	FINAL FIRST CLOSED-IN	2434	2460.6	90.0	91.9	C
E	INITIAL SECOND FLOW	397	408.2			
F	FINAL SECOND FLOW	1243	1260.0	240.0	239.9	F
F	INITIAL SECOND CLOSED-IN	1243	1260.0			
G	FINAL SECOND CLOSED-IN	2421	2437.9	360.0	357.7	C
H	FINAL HYDROSTATIC	2831	2760.8			



GAUGE NO: 2033 DEPTH: 5932.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	2783	2790.9			
B	INITIAL FIRST FLOW	107	121.4			
C	FINAL FIRST FLOW	362	373.0	30.0	30.6	F
C	INITIAL FIRST CLOSED-IN	362	373.0			
D	FINAL FIRST CLOSED-IN	2463	2481.0	90.0	91.9	C
E	INITIAL SECOND FLOW	429	447.0			
F	FINAL SECOND FLOW	1252	1280.5	240.0	239.9	F
F	INITIAL SECOND CLOSED-IN	1252	1280.5			
G	FINAL SECOND CLOSED-IN	2436	2456.0	360.0	357.7	C
H	FINAL HYDROSTATIC	2850	2775.9			

EQUIPMENT & HOLE DATA

FORMATION TESTED: UPPER ISMAY

NET PAY (ft): _____

GROSS TESTED FOOTAGE: 47.0ALL DEPTHS MEASURED FROM: KELLY BUSHING

CASING PERFS. (ft): _____

HOLE OR CASING SIZE (in): 8.750ELEVATION (ft): 5709.0 KELLY BUSHINGTOTAL DEPTH (ft): 5935.0PACKER DEPTH(S) (ft): 5883. 5888FINAL SURFACE CHOKE (in): 0.25000BOTTOM HOLE CHOKE (in): 0.750MUD WEIGHT (lb/gal): 9.00MUD VISCOSITY (sec): 38ESTIMATED HOLE TEMP. (°F): 110ACTUAL HOLE TEMP. (°F): 140 @ 5931.0 ftTICKET NUMBER: 40667800DATE: 7-11-86 TEST NO: 1TYPE DST: OPEN HOLEHALLIBURTON CAMP:
FARMINGTONTESTER: GENE ROBERTSWITNESS: HOWARD LEEPYDRILLING CONTRACTOR:
SHELBY DRILLING RIG #11FLUID PROPERTIES FOR
RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT SAMPLE	<u>1.450 @ 76 °F</u>	<u>3500 ppm</u>
TOP SAMPLE	<u>1.520 @ 80 °F</u>	<u>4000 ppm</u>
MIDDLE SAMPLE	<u>0.069 @ 68 °F</u>	<u>75757 ppm</u>
SAMPLER	<u>0.160 @ 78 °F</u>	<u>48484 ppm</u>
BOTTOM	<u>0.076 @ 68 °F</u>	<u>60606 ppm</u>
	<u>@ °F</u>	<u>ppm</u>

SAMPLER DATA

Pstg AT SURFACE: 235.0cu.ft. OF GAS: 0.443cc OF OIL: 100.0cc OF WATER: 2000.0

cc OF MUD: _____

TOTAL LIQUID cc: 2100.0

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): _____ @ _____ °F

GAS/OIL RATIO (cu.ft. per bbl): _____

GAS GRAVITY: _____

CUSHION DATA

TYPE AMOUNT WEIGHT

RECOVERED:

450 FEET OF HEAVY GAS AND OIL CUT MUD
2000 FEET OF SALT WATERMEASURED FROM
TESTER VALVE

REMARKS:

TYPE & SIZE MEASURING DEVICE: 3/4" ADJUSTABLE CHOKE					TICKET NO: 40667800
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
7-11-86					
0125					ON LOCATION
0305					PICKED UP AND MADE UP TOOL
0550					TRIPPED IN HOLE WITH TOOLS
0915	1/8BH	8 OZ			OPENED TOOL WITH A GOOD BLOW,
					4" IN BUCKET
0918	1/8	1 PSI			GOOD BLOW, BOTTOM OF BUCKET
0921	1/8	2			GOOD BLOW, INCREASING
0924	1/8	2.5			GOOD BLOW
0927	1/8	3			GOOD BLOW
0931	1/8	3.5			GOOD BLOW
0935	1/8	4			GOOD BLOW
0938	1/8	4.5			GOOD BLOW
0941	1/8	5			GOOD BLOW
0945	1/8	5.5			GOOD BLOW, CLOSED TOOL
1115	1/8	3 OZ.			OPENED TOOL, GOOD BLOW, 4" IN
					BUCKET
1126	1/8	1 PSI			GOOD BLOW INCREASING TO
					BOTTOM OF BUCKET
1146	1/8	2 PSI			GOOD BLOW
1203	1/8	5 PSI			ON 1/8" ADJ. CHOKE, GOOD BLOW
					GAS TO THE SURFACE
1205	1/8	5			GOOD BLOW, FLARE TO PIT ON
					ADJUSTABLE CHOKE.
1207	1/4	5			GOOD BLOW, PSI DROPPING
1227	1/4	1.5			GOOD BLOW, PSI STEADY
1307	1/4	1.5			GOOD BLOW
1337	1/4	1.5			GOOD STEADY BLOW
1407	1/4	1.5			GOOD BLOW
1515	1/4	1.5			CLOSED TOOL GOOD BLOW
2115					OPENED BYPASS
2135					DROPPED BAR, REVERSED OUT
2352					TRIPPED OUT OF HOLE WITH TOOLS
7-12-86					
0350					AT TOOLS
0520					TOOL LOADED OUT
0630					JOB COMPLETED

TICKET NO: 40667800

CLOCK NO: 7276 HOUR: 24



GAUGE NO: 2032

DEPTH: 5868.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	96.1			
2	2.0	107.4	11.3		
3	4.0	141.2	33.8		
4	6.0	166.9	25.6		
5	8.0	196.3	29.5		
6	10.0	223.6	27.3		
7	12.0	242.6	19.0		
8	14.0	253.4	10.7		
9	16.0	263.2	9.8		
10	18.0	272.5	9.3		
11	20.0	282.9	10.5		
12	22.0	292.6	9.7		
13	24.0	305.8	13.1		
14	26.0	319.2	13.4		
15	28.0	334.6	15.4		
C 16	30.6	353.8	19.2		
FIRST CLOSED-IN					
C 1	0.0	353.8			
2	1.0	841.8	488.0	1.0	1.505
3	2.0	1555.4	1201.6	1.9	1.211
4	3.0	1929.0	1575.2	2.7	1.050
5	4.0	2080.8	1727.0	3.5	0.939
6	5.0	2154.7	1800.9	4.3	0.852
7	6.0	2206.0	1852.2	5.0	0.786
8	7.0	2239.1	1885.3	5.7	0.731
9	8.0	2265.5	1911.7	6.4	0.682
10	9.0	2283.8	1930.0	7.0	0.644
11	10.0	2299.6	1945.8	7.6	0.607
12	12.0	2326.4	1972.6	8.6	0.551
13	14.0	2345.1	1991.3	9.6	0.504
14	16.0	2361.0	2007.2	10.5	0.464
15	18.0	2372.5	2018.7	11.3	0.431
16	20.0	2381.7	2027.9	12.1	0.403
17	22.0	2390.1	2036.3	12.8	0.379
18	24.0	2397.9	2044.1	13.5	0.357
19	26.0	2402.8	2049.0	14.1	0.338
20	28.0	2408.0	2054.2	14.6	0.321
21	30.0	2411.9	2058.2	15.1	0.306
22	35.0	2422.0	2068.2	16.3	0.273
23	40.0	2429.5	2075.7	17.3	0.247
24	45.0	2435.4	2081.6	18.2	0.225
25	50.0	2440.5	2086.7	19.0	0.208
26	55.0	2444.4	2090.7	19.7	0.192
27	60.0	2448.2	2094.4	20.3	0.179
28	70.0	2453.2	2099.4	21.3	0.157
29	80.0	2458.0	2104.2	22.1	0.141
D 30	91.9	2460.6	2106.8	23.0	0.125

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND FLOW					
E 1	0.0	408.2			
2	10.0	452.7	44.5		
3	20.0	491.6	38.9		
4	30.0	544.3	52.6		
5	40.0	594.7	50.5		
6	50.0	642.6	47.8		
7	60.0	680.2	37.7		
8	70.0	719.1	38.8		
9	80.0	758.3	39.2		
10	90.0	795.8	37.5		
11	100.0	830.7	34.9		
12	110.0	867.2	36.5		
13	120.0	902.4	35.3		
14	130.0	936.0	33.6		
15	140.0	967.6	31.6		
16	150.0	999.3	31.7		
17	160.0	1031.1	31.8		
18	170.0	1061.0	29.9		
19	180.0	1091.5	30.5		
20	190.0	1120.2	28.7		
21	200.0	1151.1	30.9		
22	210.0	1179.2	28.1		
23	220.0	1206.7	27.6		
F 24	230.0	1234.4	27.7		
25	239.9	1260.0	25.6		
SECOND CLOSED-IN					
F 1	0.0	1260.0			
2	1.0	1831.7	571.7	1.0	2.440
3	2.0	2046.2	786.2	2.0	2.128
4	3.0	2121.0	861.0	3.0	1.953
5	4.0	2161.5	901.5	4.0	1.833
6	5.0	2189.0	929.0	4.9	1.745
7	6.0	2211.1	951.1	5.9	1.663
8	7.0	2227.0	967.0	6.9	1.595
9	8.0	2239.2	979.2	7.8	1.541
10	9.0	2250.2	990.2	8.8	1.490
11	10.0	2260.2	1000.2	9.7	1.446
12	12.0	2274.9	1014.9	11.5	1.373
13	14.0	2286.5	1026.5	13.3	1.308
14	16.0	2295.9	1035.9	15.1	1.252
15	18.0	2304.3	1044.3	16.9	1.205
16	20.0	2310.5	1050.5	18.7	1.161
17	22.0	2316.9	1056.9	20.3	1.125
18	24.0	2322.5	1062.5	22.0	1.090
19	26.0	2328.3	1068.3	23.8	1.056
20	28.0	2332.5	1072.5	25.4	1.028
21	30.0	2337.1	1077.1	27.0	1.000
22	35.0	2346.1	1086.1	31.0	0.941
23	40.0	2354.1	1094.1	34.9	0.890

REMARKS:

TICKET NO: 40667800

CLOCK NO: 7276 HOUR: 24



GAUGE NO: 2032

DEPTH: 5868.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED											
24	45.0	2360.1	1100.1	38.6	0.846						
25	50.0	2366.1	1106.1	42.2	0.807						
26	55.0	2370.2	1110.2	45.7	0.772						
27	60.0	2375.0	1115.0	49.1	0.741						
28	70.0	2382.5	1122.5	55.6	0.687						
29	80.0	2388.8	1128.8	61.8	0.641						
30	90.0	2393.3	1133.3	67.6	0.602						
31	100.0	2398.5	1138.5	73.0	0.569						
32	110.0	2402.2	1142.2	78.2	0.539						
33	120.0	2405.5	1145.5	83.1	0.512						
34	135.0	2409.6	1149.6	90.1	0.478						
35	150.0	2412.9	1152.9	96.5	0.448						
36	165.0	2415.9	1155.9	102.5	0.421						
37	180.0	2419.7	1159.7	108.1	0.398						
38	195.0	2421.2	1161.2	113.3	0.378						
39	210.0	2424.0	1164.0	118.2	0.359						
40	225.0	2426.0	1166.0	122.8	0.343						
41	240.0	2427.7	1167.7	127.2	0.328						
42	260.0	2430.2	1170.2	132.6	0.310						
43	280.0	2432.5	1172.5	137.6	0.294						
44	300.0	2434.2	1174.2	142.2	0.279						
45	320.0	2435.8	1175.8	146.6	0.266						
46	340.0	2437.0	1177.0	150.6	0.254						
G 47	357.7	2437.9	1177.9	154.0	0.245						

REMARKS:

TICKET NO: 40667800

CLOCK NO: 14128 HOUR: 24



GAUGE NO: 2033

DEPTH: 5932.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	121.4			
2	2.0	121.7	0.3		
3	4.0	149.3	27.6		
4	6.0	181.0	31.6		
5	8.0	215.1	34.2		
6	10.0	241.2	26.0		
7	12.0	261.4	20.2		
8	14.0	272.9	11.5		
9	16.0	282.3	9.4		
10	18.0	293.7	11.4		
11	20.0	304.2	10.5		
12	22.0	314.5	10.3		
13	24.0	327.0	12.5		
14	26.0	341.3	14.3		
15	28.0	355.0	13.7		
C 16	30.6	373.0	18.0		
FIRST CLOSED-IN					
C 1	0.0	373.0			
2	1.0	719.1	346.2	1.0	1.507
3	2.0	1133.0	760.0	1.8	1.219
4	3.0	1499.0	1126.0	2.7	1.052
5	4.0	1856.8	1483.9	3.6	0.935
6	5.0	2028.7	1655.7	4.3	0.850
7	6.0	2116.2	1743.2	5.0	0.786
8	7.0	2169.5	1796.5	5.7	0.730
9	8.0	2219.9	1846.9	6.3	0.684
10	9.0	2248.6	1875.6	7.0	0.644
11	10.0	2273.4	1900.4	7.5	0.609
12	12.0	2314.5	1941.5	8.6	0.550
13	14.0	2340.9	1967.9	9.6	0.503
14	16.0	2361.6	1988.6	10.5	0.465
15	18.0	2376.6	2003.7	11.3	0.431
16	20.0	2388.1	2015.1	12.1	0.403
17	22.0	2398.5	2025.5	12.8	0.378
18	24.0	2406.4	2033.4	13.5	0.357
19	26.0	2415.2	2042.2	14.1	0.338
20	28.0	2422.7	2049.7	14.6	0.321
21	30.0	2427.9	2054.9	15.2	0.305
22	35.0	2437.2	2064.2	16.3	0.273
23	40.0	2445.9	2072.9	17.3	0.247
24	45.0	2453.1	2080.1	18.2	0.226
25	50.0	2459.2	2086.2	19.0	0.207
26	55.0	2463.3	2090.4	19.7	0.192
27	60.0	2466.9	2094.0	20.3	0.179
28	70.0	2472.3	2099.3	21.3	0.158
29	80.0	2476.7	2103.7	22.1	0.141
D 30	91.9	2481.0	2108.0	23.0	0.125

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND FLOW					
E 1	0.0	447.0			
2	10.0	476.3	29.3		
3	20.0	515.2	38.9		
4	30.0	565.9	50.7		
5	40.0	618.6	52.7		
6	50.0	666.6	47.9		
7	60.0	706.1	39.6		
8	70.0	745.2	39.0		
9	80.0	783.0	37.8		
10	90.0	819.9	36.9		
11	100.0	855.9	36.0		
12	110.0	892.5	36.5		
13	120.0	925.8	33.3		
14	130.0	959.4	33.6		
15	140.0	991.7	32.3		
16	150.0	1023.9	32.3		
17	160.0	1054.5	30.5		
18	170.0	1084.6	30.1		
19	180.0	1116.0	31.3		
20	190.0	1144.7	28.7		
21	200.0	1174.3	29.6		
22	210.0	1202.2	27.9		
23	220.0	1228.8	26.7		
F 24	230.0	1254.5	25.6		
25	239.9	1280.5	26.0		
SECOND CLOSED-IN					
F 1	0.0	1280.5			
2	1.0	1712.7	432.2	1.0	2.428
3	2.0	1956.5	676.0	2.0	2.135
4	3.0	2048.1	767.6	3.0	1.959
5	4.0	2125.7	845.2	4.0	1.834
6	5.0	2164.4	883.9	4.9	1.743
7	6.0	2192.7	912.2	5.9	1.665
8	7.0	2215.7	935.2	6.8	1.598
9	8.0	2232.5	952.0	7.8	1.540
10	9.0	2249.2	968.7	8.7	1.494
11	10.0	2262.7	982.2	9.6	1.448
12	12.0	2279.5	999.0	11.5	1.372
13	14.0	2294.4	1013.9	13.3	1.308
14	16.0	2306.1	1025.5	15.1	1.254
15	18.0	2315.8	1035.3	16.9	1.204
16	20.0	2324.5	1044.0	18.6	1.163
17	22.0	2331.4	1050.9	20.4	1.123
18	24.0	2338.1	1057.6	22.1	1.088
19	26.0	2343.7	1063.2	23.7	1.057
20	28.0	2348.2	1067.7	25.4	1.028
21	30.0	2353.4	1072.9	27.0	1.000
22	35.0	2363.3	1082.8	31.0	0.941
23	40.0	2371.2	1090.7	34.8	0.890

REMARKS:

TICKET NO: 40667800

CLOCK NO: 14128 HOUR: 24

















GAUGE NO: 2033

DEPTH: 5932.0

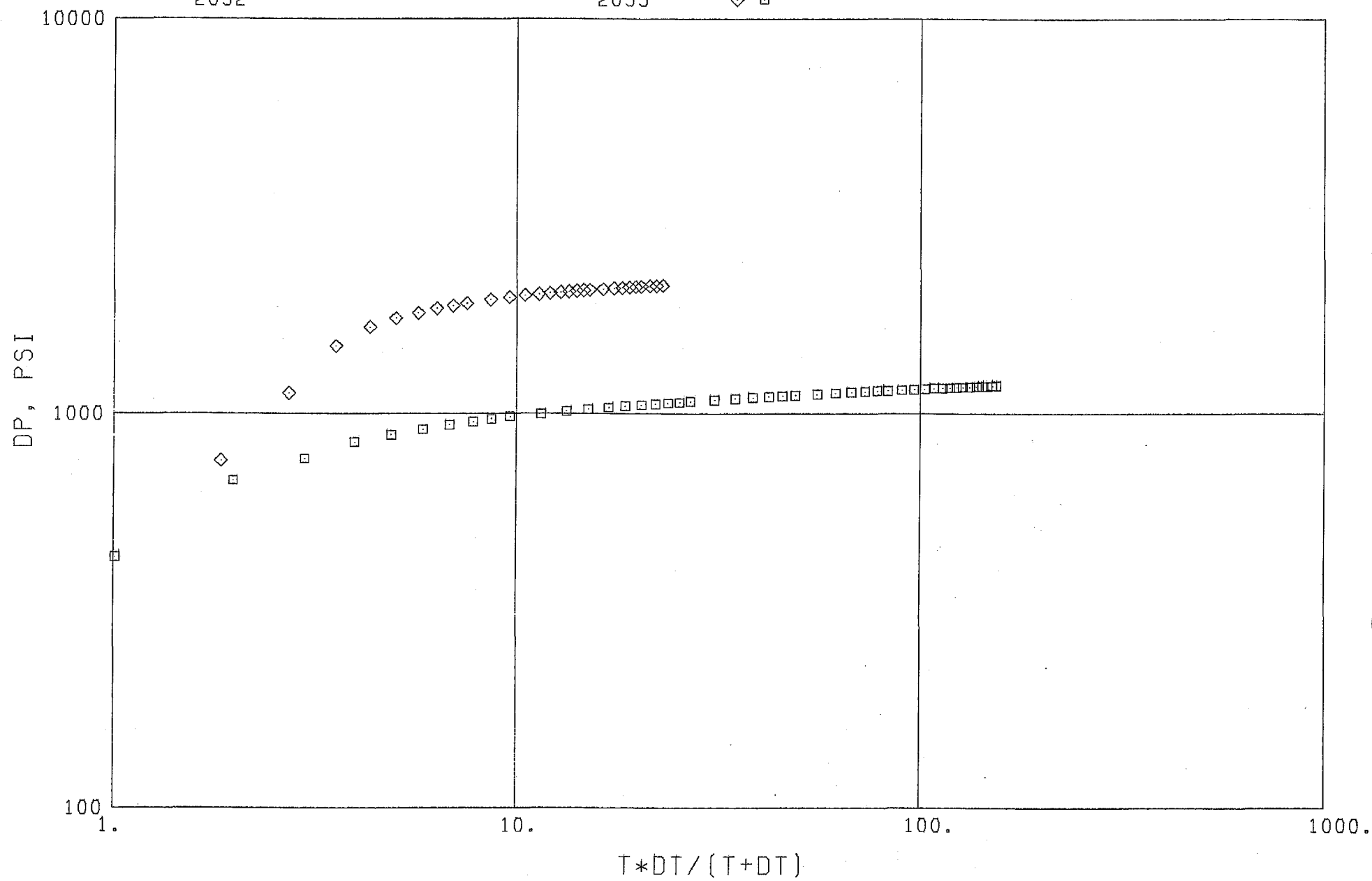
REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED											
24	45.0	2377.6	1097.1	38.6	0.846						
25	50.0	2383.6	1103.1	42.2	0.807						
26	55.0	2388.6	1108.1	45.7	0.772						
27	60.0	2392.3	1111.8	49.1	0.741						
28	70.0	2400.2	1119.7	55.6	0.687						
29	80.0	2406.7	1126.2	61.8	0.641						
30	90.0	2411.9	1131.4	67.6	0.602						
31	100.0	2416.1	1135.6	73.0	0.569						
32	110.0	2420.6	1140.1	78.2	0.539						
33	120.0	2423.4	1142.9	83.1	0.512						
34	135.0	2428.6	1148.1	90.0	0.478						
35	150.0	2431.4	1150.9	96.5	0.448						
36	165.0	2434.9	1154.4	102.5	0.421						
37	180.0	2438.0	1157.5	108.1	0.398						
38	195.0	2440.8	1160.3	113.3	0.378						
39	210.0	2442.4	1161.9	118.2	0.359						
40	225.0	2444.4	1163.9	122.8	0.343						
41	240.0	2446.4	1165.9	127.1	0.328						
42	260.0	2448.5	1168.0	132.6	0.310						
43	280.0	2450.8	1170.3	137.6	0.294						
44	300.0	2452.2	1171.7	142.2	0.279						
45	320.0	2453.7	1173.2	146.6	0.266						
46	340.0	2455.3	1174.8	150.6	0.254						
G 47	357.7	2456.0	1175.5	154.0	0.245						

REMARKS:

TICKET NO. 40667800

		O.D.	I.D.	LENGTH	DEPTH
1					
	DRILL PIPE.....	4.500	3.826	5154.0	
3					
	DRILL COLLARS.....	6.250	2.250	606.0	
50					
	IMPACT REVERSING SUB.....	6.000	3.000	1.0	5761.0
3					
	DRILL COLLARS.....	6.250	2.250	93.0	
5					
	CROSSOVER.....	6.000	3.000	1.0	
13					
	DUAL CIP SAMPLER.....	5.030	0.870	7.0	
60					
	HYDROSPRING TESTER.....	5.000	0.750	5.0	5866.0
80					
	AP RUNNING CASE.....	5.000	2.250	4.0	5868.0
15					
	JAR.....	5.030	1.750	5.0	
16					
	VR SAFETY JOINT.....	5.000	1.000	3.0	
70					
	OPEN HOLE PACKER.....	7.750	1.530	6.0	5883.0
70					
	OPEN HOLE PACKER.....	7.750	1.530	5.0	5888.0
20					
	FLUSH JOINT ANCHOR.....	5.750	3.000	41.0	
81					
	BLANKED-OFF RUNNING CASE.....	5.750		4.0	5932.0
TOTAL DEPTH					5935.0

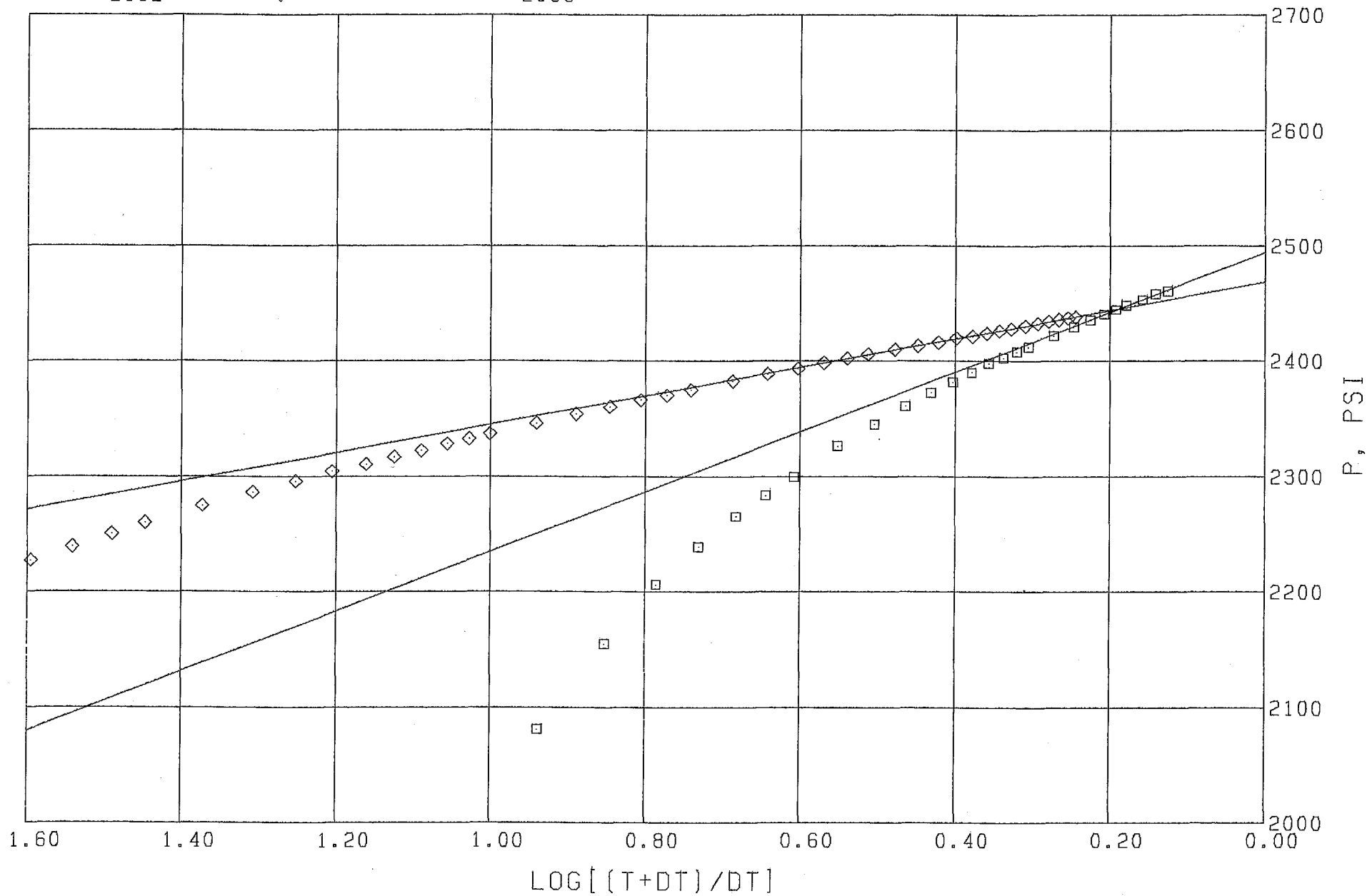
EQUIPMENT DATA

GAUGE NO CIP 1 2
2032GAUGE NO CIP 1 2
2033

TICKET NO 40667800

GAUGE NO CIP 1 2
2032 □ ◇

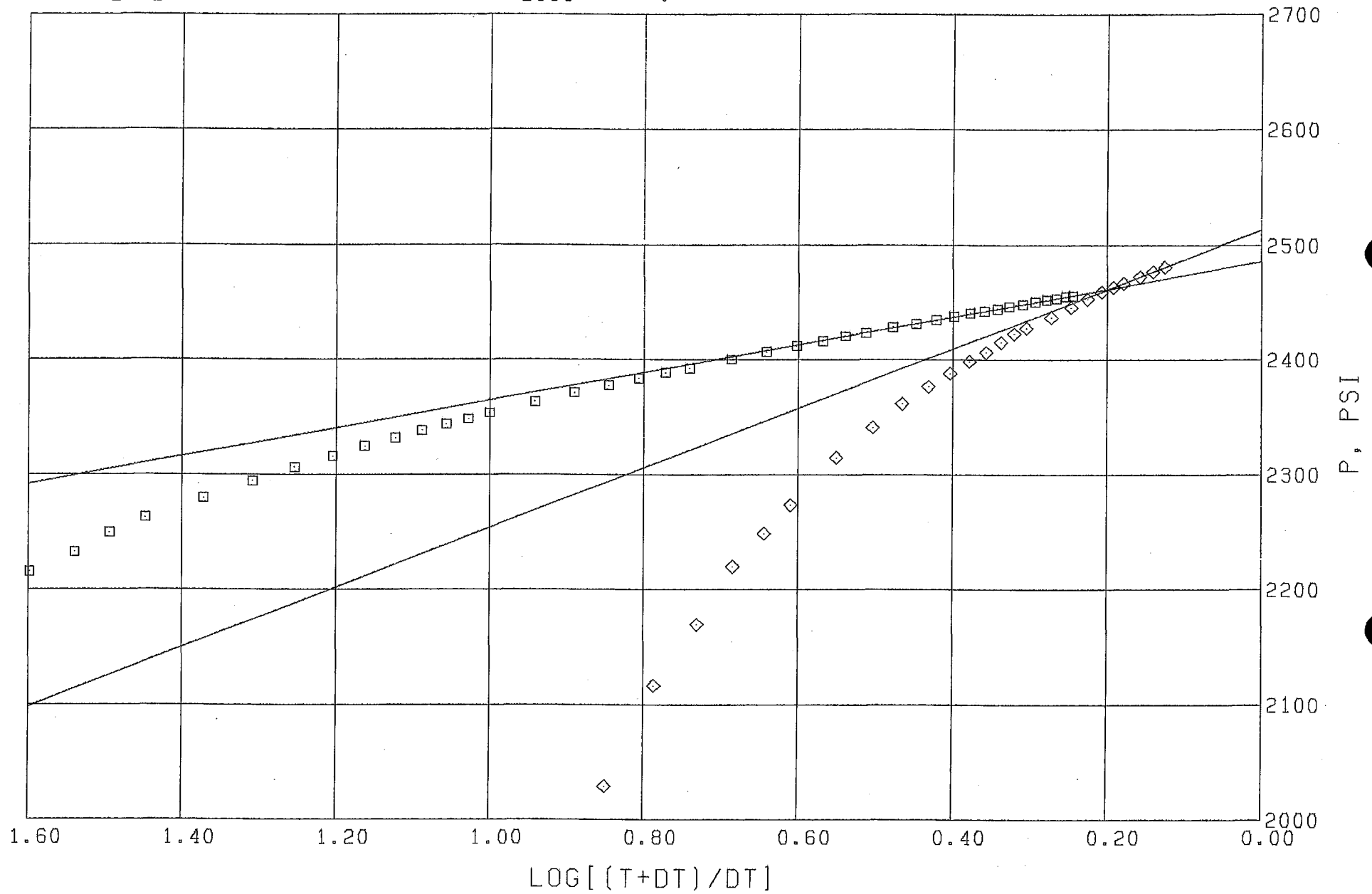
GAUGE NO CIP 1 2
2033



TICKET NO 40667800

GAUGE NO CIP 1 2
2032

GAUGE NO CIP 1 2
2033 \diamond \square



TICKET NUMBER 40667800

SUMMARY OF RESERVOIR PARAMETERS

USING HORNER METHOD FOR LIQUID WELLS

OIL GRAVITY 0.0 °API@60°F WATER SALINITY 4.8 % SALT
 GAS GRAVITY 0.700 FLUID GRADIENT 0.4483 psi/ft
 GAS/OIL RATIO 0.0 SCF/STB FLUID PROPERTIES AT 2500.0 psig
 TEMPERATURE 140.0 °F VISCOSITY 0.516 cp
 NET PAY 0.0 ft FMT VOL FACTOR 1.017 Rvol/Svol
 POROSITY 10.0 % SYSTEM COMPRESSIBILITY 7.68 $\times 10^{-6}$ vol/vol/psi
 PIPE CAPACITY FACTORS 0.00492 0.01422 bbl/ft

GAUGE NUMBER		2032	2032	2033	2033			
GAUGE DEPTH		5868.0	5868.0	5932.0	5932.0			
FLOW AND CIP PERIOD		1	2	1	2			UNITS
FINAL FLOW PRESSURE	P_f	353.8	1260.0	373.0	1280.5			psig
TOTAL FLOW TIME	t	30.6	270.5	30.6	270.5			min
EXTRAPOLATED PRESSURE	P^*	2494.0	2468.4	2513.3	2486.2			psig
ONE CYCLE PRESSURE		2234.9	2345.1	2253.6	2364.6			psig
PRODUCTION RATE	Q	165.2	159.7	161.3	159.0			BPD
TRANSMISSIBILITY	kh/μ	105.5	214.1	102.7	216.3			$\frac{md-ft}{cp}$
FLOW CAPACITY	kh	54.4137	110.457	52.9906	111.622			md-ft
PERMEABILITY	k	1.15774	2.35015	1.12746	2.37494			md
SKIN FACTOR	S	5.1	5.4	5.1	5.6			
DAMAGE RATIO	DR	2.2	1.9	2.2	2.0			
POTENTIAL RATE	Q_1	358.5	309.2	350.2	311.5			BPD
RADIUS OF INVESTIGATION	r_t	39.1	165.4	38.5	166.3			ft

REMARKS: CALCULATIONS WERE BASED ON 100 % SALTWATER (48000 PPM) PRODUCTION.

NOTICE: THESE CALCULATIONS ARE BASED UPON INFORMATION FURNISHED BY YOU AND TAKEN FROM DRILL STEM PRESSURE CHARTS, AND ARE FURNISHED TO YOU FOR YOUR INFORMATION. IN FURNISHING SUCH CALCULATIONS AND EVALUATIONS BASED THEREON, HALLIBURTON IS MERELY EXPRESSING ITS OPINION. YOU AGREE THAT HALLIBURTON MAKES NO WARRANTY EXPRESS OR IMPLIED AS TO THE ACCURACY OF SUCH CALCULATIONS OR OPINIONS, AND THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DUE TO NEGLIGENCE OR OTHERWISE, IN CONNECTION WITH SUCH OPINIONS.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

072902

CORE ANALYSIS REPORT

FOR

CELSIUS ENERGY COMPANY

SKY UNIT NO. 1
WILDCAT
SAN JUAN, UTAH

RECEIVED
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DIVISION OF
OIL, GAS & MINING

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

PAGE 1

CELSIUS ENERGY COMPANY
 SKY UNIT NO. 1
 WILDCAT
 SAN JUAN, UTAH

DATE : 12-JUL-86
 FORMATION : PARADOX
 DRLG. FLUID: WBM
 LOCATION : SW,SW SEC. 12-T38S-R25E

FILE NO : 38030-003451
 ANALYSTS : DS:SP
 ELEVATION: 5709 KB

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO MAXIMUM	AIR (MD) 90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
ISMAY ZONE CORE # 1 5875-5935								
	5875.0-90.0							ANHYDRITE --- NO ANALYSIS
1	5890.0-91.0	0.63	0.58	10.1	6.7	11.5	2.87	DOL BRN VFXLN SL/ANHY
2	5891.0-92.0	2.19	1.97	15.0	14.8	24.0	2.86	DOL BRN VFXLN SL/ANHY
3	5892.0-93.0	2.50	2.32	16.9	6.8	22.8	2.85	DOL BRN VFXLN SL/ANHY
4	5893.0-94.0	0.24	0.13	8.6	5.1	60.6	2.86	DOL BRN VFXLN SL/ANHY
5	5894.0-95.0	0.01	*	1.6	11.0	44.1	2.80	DOL GRY VFXLN SL/LM
6	5895.0-96.0	0.04	0.02	1.8	11.0	20.6	2.75	LM GRY VFXLN SL/DOL
7	5896.0-97.0	3.23	2.97	11.4	10.6	24.1	2.78	LM GRY VFXLN SL/DOL SL/ANHY P-P
8	5897.0-98.0	2.02	1.76	11.8	11.5	32.9	2.81	LM GRY VFXLN SL/DOL SL/ANHY P-P
9	5898.0-99.0	4.28	4.13	12.9	7.0	29.7	2.79	LM GRY VFXLN SL/DOL SL/ANHY P-P
10	5899.0-00.0	12.	12.	17.2	7.4	32.8	2.78	LM GRY VFXLN SL/DOL SL/ANHY P-P
11	5900.0-01.0	6.71	6.71	15.3	7.2	31.9	2.83	LM GRY VFXLN SL/DOL SL/ANHY P-P
12	5901.0-02.0	0.24	0.19	10.8	7.0	28.0	2.81	LM GRY VFXLN SL/DOL SL/ANHY P-P
13	5902.0-03.0	2.45	1.29	10.3	6.1	22.6	2.77	LM GRY VFXLN SL/DOL SL/ANHY P-P
14	5903.0-04.0	1.25	1.20	8.1	7.1	26.3	2.77	LM GRY VFXLN SL/DOL SL/ANHY P-P
15	5904.0-05.0	1.84	1.84	9.9	6.6	30.2	2.79	LM LTBRN VFXLN SL/DOL SL/ANHY P-P
16	5905.0-06.0	0.75	0.69	8.0	5.2	21.0	2.80	DOL BRN VFXLN SL/ANHY P-P
17	5906.0-07.0	0.15	0.11	4.8	4.8	24.0	2.84	DOL BRN VFXLN SL/ANHY P-P
18	5907.0-08.0	1.19	1.05	9.3	6.9	16.5	2.85	DOL BRN VFXLN SL/ANHY P-P
19	5908.0-09.0	1.35	1.31	9.1	4.7	24.7	2.88	DOL BRN VFXLN SL/ANHY P-P
20	5909.0-10.0	42.	8.32	9.9	7.2	22.6	2.89	DOL BRN VFXLN SL/ANHY P-P
21	5910.0-11.0	0.64	0.59	12.0	6.9	43.1	2.84	DOL BRN VFXLN SL/ANHY
22	5911.0-12.0	0.04	0.04	6.3	9.0	41.9	2.83	DOL BRN VFXLN SL/ANHY
23	5912.0-13.0	0.02	0.02	4.0	12.4	52.9	2.83	DOL BRN VFXLN SL/ANHY
24	5913.0-14.0	4.44	*	20.0	10.0	36.6	2.83	DOL BRN VFXLN SL/ANHY

**

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CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

PAGE 2

CELSIUS ENERGY COMPANY
SKY UNIT NO. 1

DALLAS, TEXAS
DATE : 12-JUL-86
FORMATION : PARADOX

FILE NO : 38030-003451
ANALYSTS : DS:SP

FULL DIAMETER ANALYSIS-BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO MAXIMUM	AIR (MD) 90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
25	5914.0-15.0	2.58	2.54	17.4	15.9	31.7	2.85	DOL BRN VFXLN SL/ANHY
26	5915.0-16.0	3.88	3.82	17.7	10.8	16.3	2.85	DOL BRN VFXLN SL/ANHY
27	5916.0-17.0	0.18	0.18	4.1	8.2	28.2	2.83	DOL BRN VFXLN SL/ANHY
28	5917.0-18.0	0.41	0.40	5.2	4.5	26.7	2.81	DOL LTBRN VFXLN SL/LM
29	5918.0-19.0	1.22	1.21	4.8	2.7	37.5	2.79	LM GRY VFXLN SL/DOL P-P
30	5919.0-20.0	0.83	0.83	6.2	14.3	24.5	2.76	LM GRY VFXLN SL/DOL SL/VUG
31	5920.0-21.0	2.48	1.69	5.9	12.8	25.5	2.76	LM GRY VFXLN SL/DOL SL/VUG
32	5921.0-22.0	7.79	6.04	6.7	6.5	25.9	2.77	LM GRY VFXLN SL/DOL SL/VUG
33	5922.0-23.0	31.	16.	10.5	2.7	40.1	2.74	LM GRY VFXLN SL/DOL SL/VUG
34	5923.0-24.0	18.	14.	10.7	4.6	32.4	2.74	LM GRY VFXLN SL/DOL SL/VUG
35	5924.0-25.0	5.40	5.03	10.3	2.3	54.3	2.73	LM GRY VFXLN SL/DOL SL/VUG
36	5925.0-26.0	11.	10.	10.7	1.3	26.4	2.73	LM GRY VFXLN SL/DOL SL/VUG
37	5926.0-27.0	16.	14.	6.6	0.0	16.4	2.75	LM GRY VFXLN SL/ANHY
38	5927.0-28.0	2.35	2.31	6.3	0.0	53.1	2.76	LM GRY VFXLN SL/ANHY
39	5928.0-29.0	2.51	2.28	4.5	0.0	16.8	2.77	LM GRY VFXLN SL/ANHY
40	5929.0-30.0	0.70	0.51	3.1	0.0	17.1	2.77	LM GRY VFXLN SL/ANHY
41	5930.0-31.0	0.44	0.25	2.4	0.0	33.9	2.78	LM GRY VFXLN SL/ANHY
42	5931.0-32.0	0.35	0.17	2.4	0.0	58.7	2.78	LM GRY VFXLN SL/ANHY
43	5932.0-33.0	0.04	0.02	9.6	0.0	59.9	2.81	DOL LTBRN VFXLN SL/LM
44	5933.0-34.0	1.33	*	21.4	9.2	69.4	2.81	DOL LTBRN VFXLN SL/LM
	5934.0-35.0							CORE LOSS

** DENOTES FRACTURE PERMEABILITY

* SAMPLE NOT SUITABLE FOR FULL DIAMETER ANALYSIS

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering

CELSIUS ENERGY COMPANY
SKY UNIT NO. 1

DALLAS, TEXAS
DATE : 12-JUL-86
FORMATION : PARADOX

FILE NO. : 38030-003451
ANALYSTS : DS/SP

*** CORE SUMMARY AVERAGES FOR 1 ZONE ***

DEPTH INTERVAL: 5890.0 TO 5934.0

FEET OF CORE ANALYZED : 44.0 FEET OF CORE INCLUDED IN AVERAGES: 44.0

--- SAMPLES FALLING WITHIN THE FOLLOWING RANGES WERE AVERAGED ---

PERMEABILITY MAXIMUM RANGE (MD.)	:	0.00 TO 45.	(UNCORRECTED FOR SLIPPAGE)
HELIUM POROSITY RANGE (%)	:	0.0 TO 100.0	
OIL SATURATION RANGE (%)	:	0.0 TO 100.0	
WATER SATURATION RANGE (%)	:	0.0 TO 100.0	

SHALE SAMPLES EXCLUDED FROM AVERAGES.

AVERAGES FOR DEPTH INTERVAL: 5890.0 TO 5934.0

AVERAGE PERMEABILITY (MILLIDARCIES)		PRODUCTIVE CAPACITY (MILLIDARCY-FEET)	
ARITHMETIC PERMEABILITY :	4.5	ARITHMETIC CAPACITY :	199.
GEOMETRIC PERMEABILITY :	1.2	GEOMETRIC CAPACITY :	53.
HARMONIC PERMEABILITY :	0.16	HARMONIC CAPACITY :	7.2
GEOMETRIC MAXIMUM & 90 DEG PERM. :	0.89	GEOMETRIC MAXIMUM & 90 DEG CAPACITY:	39.
AVERAGE POROSITY (PERCENT) :	9.4	AVERAGE TOTAL WATER SATURATION :	32.7
		(PERCENT OF PORE SPACE)	
AVERAGE RESIDUAL OIL SATURATION :	7.3	AVERAGE CONNATE WATER SATURATION ** :	31.3
(PERCENT OF PORE SPACE)		(PERCENT OF PORE SPACE)	

** ESTIMATED FROM TOTAL
WATER SAUTRATION.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

PAGE NO. 1

PERMEABILITY VS POROSITY

COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT

WELL : SKY UNIT NO. 1
COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
POROSITY : PERCENT (HELIUM)

DEPTH INTERVAL	RANGE & SYMBOL	PERMEABILITY MINIMUM MAXIMUM	POROSITY MIN. MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC HARMONIC GEOMETRIC
5890.0 - 5934.0	1 (+)	0.000 45.0	0.0 25.0	9.4	4.5 0.16 1.2

PERMEABILITY: MILLIDARCIES

0.01

0.1

10

100

0.0 4.0 8.0 12.0 16.0 20.0 24.0

POROSITY: PERCENT

PERMEABILITY VS. POROSITY

CELSIUS ENERGY COMPANY

SKY UNIT NO. 1

WILDCAT

SAN JUAN, UTAH

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
 FIELD : WILDCAT

WELL : SKY UNIT NO. 1
 COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.000 TO 45.
 POROSITY : PERCENT (HELIUM) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 5890.0 - 5934.0 INTERVAL LENGTH : 44.0
 FEET ANALYZED IN ZONE : 44.0 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY AVERAGE	PERMEABILITY AVERAGES		
	ARITHMETIC	HARMONIC	GEOMETRIC
9.4	4.5	0.16	1.2

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
 FIELD : WILDCAT

WELL : SKY UNIT NO. 1
 COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY POROSITY RANGES

POROSITY RANGE	FEET IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.0 - 2.0	2.0	1.7	0.020	0.025	4.5	4.5
2.0 - 4.0	3.0	2.6	0.476	0.497	6.8	11.4
4.0 - 6.0	7.0	4.8	0.401	0.996	15.9	27.3
6.0 - 8.0	5.0	6.4	1.6	5.4	11.4	38.6
8.0 - 10.0	8.0	9.1	1.0	6.1	18.2	56.8
10.0 - 12.0	9.0	10.7	3.5	8.2	20.5	77.3
12.0 - 14.0	2.0	12.4	1.7	2.5	4.5	81.8
14.0 - 16.0	2.0	15.1	3.8	4.4	4.5	86.4
16.0 - 18.0	4.0	17.3	4.2	5.2	9.1	95.5
20.0 - 22.0	2.0	20.7	2.4	2.9	4.5	100.0

TOTAL NUMBER OF FEET = 44.0

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
 FIELD : WILDCAT

WELL : SKY UNIT NO. 1
 COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	FEET IN RANGE	AVERAGE PERM. (GEOM.)	PERM. (ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.010 - 0.020	1.0	0.010	0.010	1.6	2.3	2.3
0.020 - 0.039	1.0	0.020	0.020	4.0	2.3	4.5
0.039 - 0.078	3.0	0.040	0.040	5.9	6.8	11.4
0.078 - 0.156	1.0	0.150	0.150	4.8	2.3	13.6
0.156 - 0.312	3.0	0.218	0.220	7.8	6.8	20.5
0.312 - 0.625	3.0	0.398	0.400	3.3	6.8	27.3
0.625 - 1.250	7.0	0.823	0.851	7.6	15.9	43.2
1.250 - 2.500	9.0	1.9	1.9	10.9	20.5	63.6
2.500 - 5.000	7.0	3.3	3.3	14.4	15.9	79.5
5.- 10.	3.0	6.6	6.6	10.8	6.8	86.4
10.- 20.	4.0	14.	14.	11.3	9.1	95.5
20.- 40.	1.0	31.	31.	10.5	2.3	97.7
40.- 80.	1.0	42.	42.	9.9	2.3	100.0

TOTAL NUMBER OF FEET = 44.0

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
 DALLAS, TEXAS

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: CELSIUS ENERGY COMPANY
 FIELD : WILDCAT

WELL : SKY UNIT NO. 1
 COUNTY, STATE: SAN JUAN, UTAH

POROSITY-FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.0	0.0	44.0	100.0	9.4	9.2
2.0	2.0	0.8	42.0	99.2	9.7	9.5
4.0	5.0	2.7	39.0	97.3	10.3	9.9
6.0	12.0	10.8	32.0	89.2	11.5	10.7
8.0	17.0	18.6	27.0	81.4	12.4	11.2
10.0	25.0	36.2	19.0	63.8	13.8	12.5
12.0	34.0	59.7	10.0	40.3	16.6	16.5
14.0	36.0	65.8	8.0	34.2	17.6	17.0
16.0	38.0	73.1	6.0	26.9	18.4	
18.0	42.0	89.9	2.0	10.1	20.7	
20.0	42.0	89.9	2.0	10.1	20.7	
22.0	44.0	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 411.6

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

PAGE 5

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

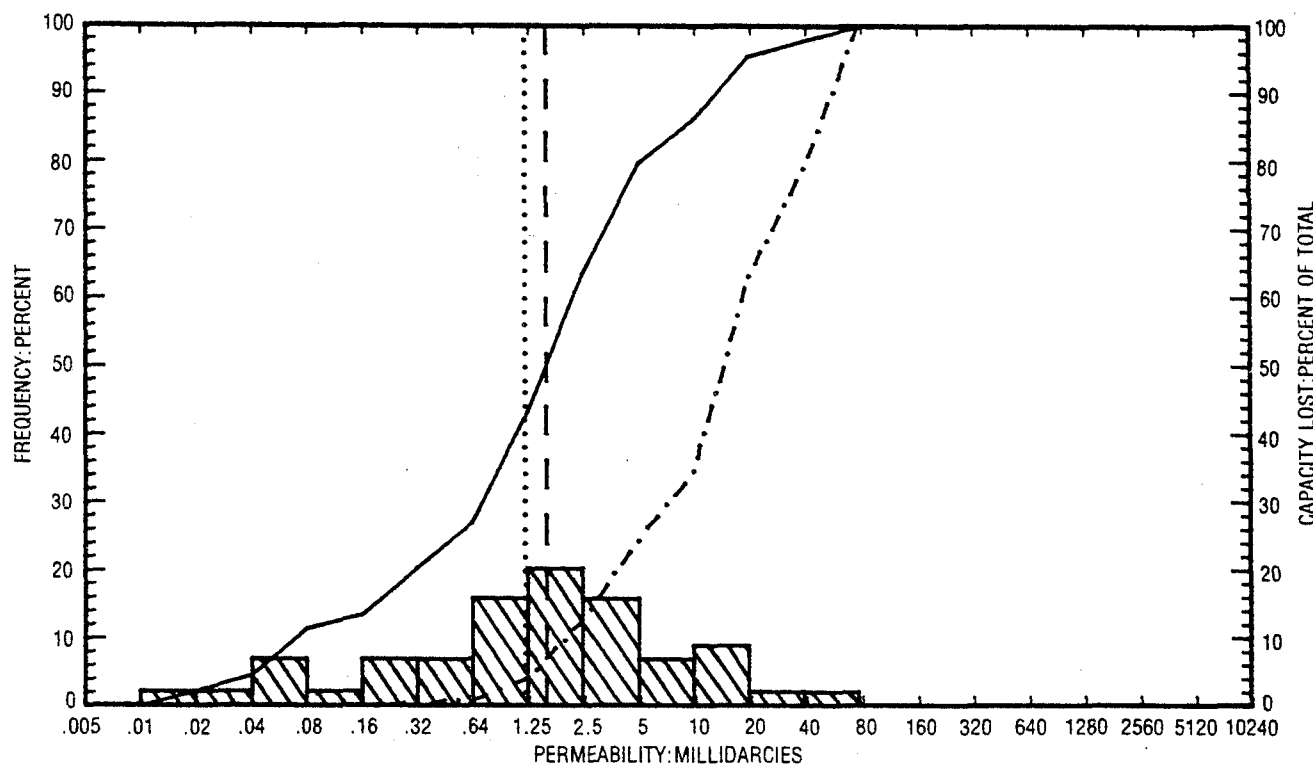
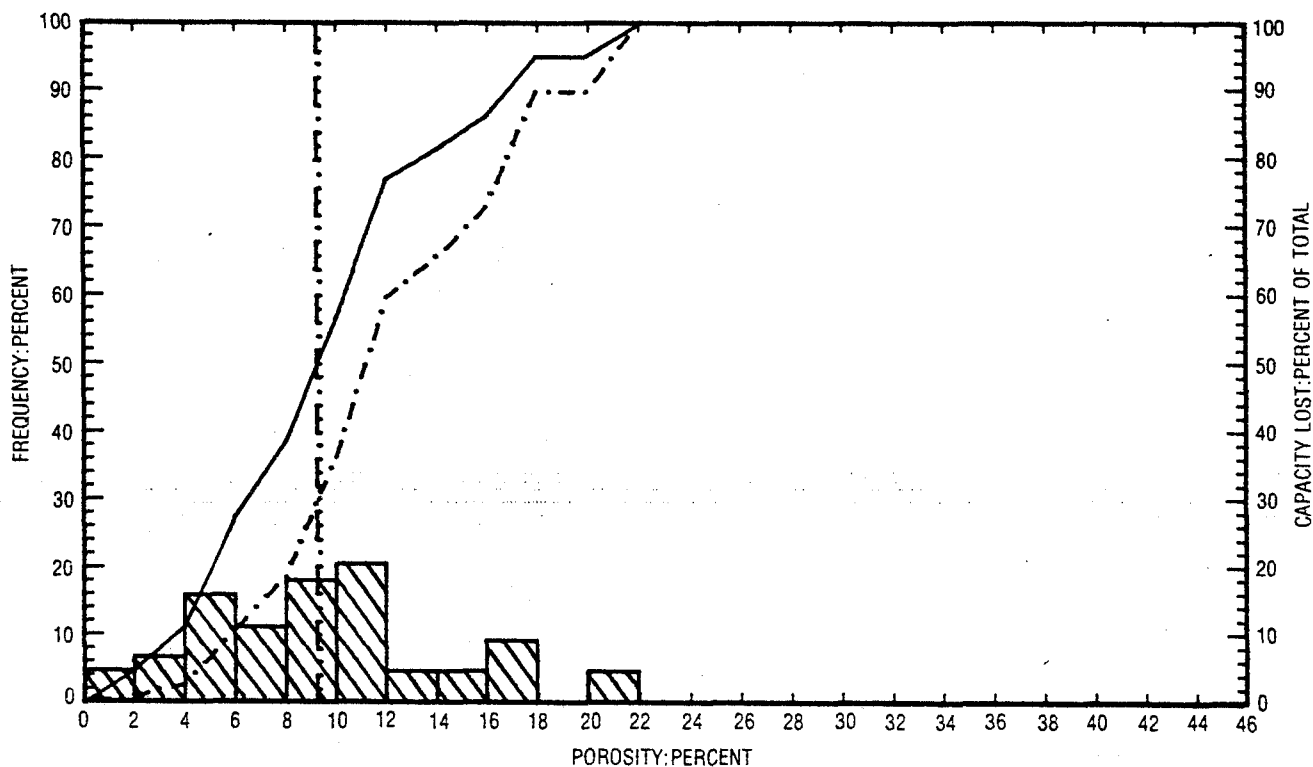
COMPANY: CELSIUS ENERGY COMPANY
FIELD : WILDCAT

WELL : SKY UNIT NO. 1
COUNTY, STATE: SAN JUAN, UTAH

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	44.0	100.0	1.21	1.57
0.010	0.0	0.0	44.0	100.0	1.29	1.57
0.020	1.0	0.0	43.0	100.0	1.35	1.64
0.039	2.0	0.0	42.0	100.0	1.50	1.70
0.078	5.0	0.1	39.0	99.9	1.98	1.91
0.156	6.0	0.2	38.0	99.8	2.12	1.98
0.312	9.0	0.5	35.0	99.5	2.57	2.23
0.625	12.0	1.1	32.0	98.9	3.06	2.50
1.250	19.0	4.1	25.0	95.9	4.42	3.54
2.500	28.0	12.8	16.0	87.2	7.21	6.30
5.	35.0	24.6	9.0	75.4	13.40	12.97
10.	38.0	34.6	6.0	65.4	19.16	
20.	42.0	63.3	2.0	36.7	36.08	40.00
40.	43.0	78.9	1.0	21.1	42.00	
80.	44.0	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET (ARITHMETIC) = 198.70



PERMEABILITY AND POROSITY HISTOGRAMS

CELSIUS ENERGY COMPANY
 SKY UNIT NO. 1
 WILDCAT
 SAN JUAN, UTAH

LEGEND

ARITHMETIC MEAN POROSITY
GEOMETRIC MEAN PERMEABILITY
MEDIAN VALUE	----
CUMULATIVE FREQUENCY	————
CUMULATIVE CAPACITY LOST	- - - - -

Litton

Core Lab

38 S. 25 E. Sec. 12

API - 43-037-31235

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**DIVISION OF
OIL, GAS & MINING**

ANALYTICAL REPORT

081127

WB4578

CELSIUS ENERGY COMPANY

Litton**Core Lab****CORE LABORATORIES, INC**1300 SOUTH POTOMAC ST. SUITE 130
AURORA, CO. 80012

PHONE: (303) 751-1780

ANALYTICAL REPORTCOMPANY: **CELSIUS ENERGY COMPANY**WELL NAME: SKY UNIT #1
TYPE OF WATER:
DEPTH:
LEASE:
LOCATION:
FORMATION:
COUNTY:

DATE SAMPLED:

DATE RECEIVED: 7/30/86

DATE ANALYZED: 7/31/86

FILE NUMBER: 6307-W86578

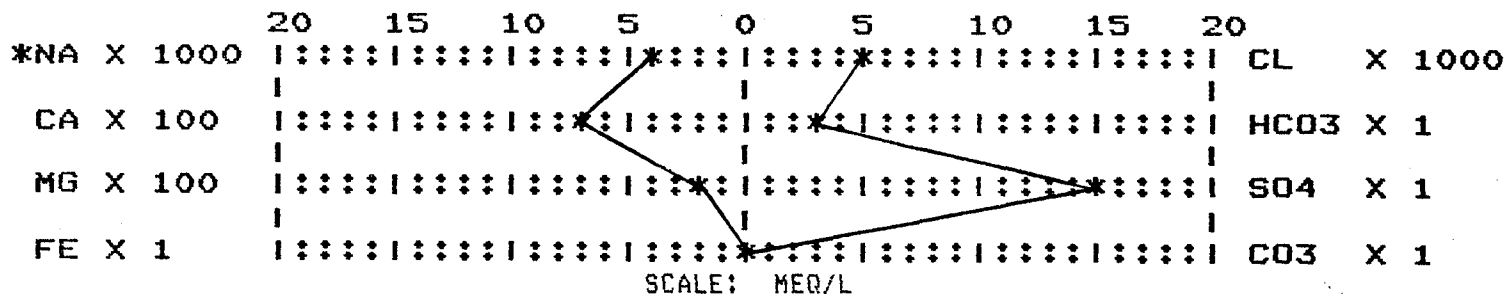
SAMPLE #: W86578-1

CONSTITUENTS

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
CALC. SODIUM (NA)	87911	3823.9	CHLORIDE (CL)	169950	4794.3
CALCIUM (CA)	14000	698.6	SULFATE (SO4)	740	15.4
MAGNESIUM (MG)	2900	238.6	CARBONATE (CO3)	<1.0	0.0
IRON (FE)	<0.1	0.0	BICARBONATE (HCO3)	168	2.8
POTASSIUM (K)	2010	51.4	HYDROXIDE (OH)	<0.5	0.0

TOTAL DISSOLVED SOLIDS (CALC.) 277679 MG/L

HYDROGEN SULFIDE: NEGATIVE

PHYSICAL PROPERTIESPH 6.36
SPECIFIC GRAVITY @ 77 F 1.1980
RESISTIVITY (OHM-METERS) @ 77 F 0.050

*-INCLUDES POTASSIUM MEQ

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